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Montana Outdoors

SEPTEMBER–OCTOBER 2007 $2.50

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PUBLIC HUNTING LAND

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How to move a mountain of meat

WMAs: crown jewels of Montana wildlife habitat

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Montana Outdoors

SEPTEMBER–OCTOBER 2007

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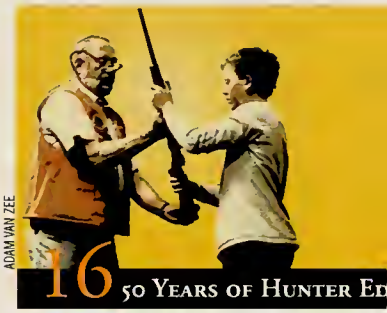

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FAMILY AFFAIR A recent Hunter Education graduate returns from an afternoon deer hunt with his parents. See page 16 to learn how Montana has been molding safe and responsible young hunters for half a century. Photo by Donald M. Jones.

FRONT COVER Mule deer doe and buck by Donald M. Jones.

Concerned about bad gas

The article "The High Price of Gas" (July–August) was well written and provided excellent insight into the energy problem. I've been a professional electrical engineer in power generation for 30 years and also have graduate school education in wildlife management. I view Wyoming and Montana as the American equivalent of Africa's Serengeti Plain—a sacred resource beyond price. To meet the massive energy needs to replace fossil fuels, I can think of only one presently available and viable option: nuclear power plants and a combination of electric and biofuel vehicles. There needs to be a national policy with landmarks and time lines for moving in a direction of independence from oil and coal. Thanks again for your cognizant role in protecting Montana.

John F. Marte
Nine Mile Falls, WA

The July–August issue of *Montana Outdoors* was truly outstanding. In particular, I appreciate your taking on two very important issues: the environmental impacts of development along our precious rivers and coal-bed methane wells. Both articles were very informative, and I hope they prompt people to express their support for river setbacks and the "new model" of energy development proposed by FWP director Jeff Hagener. Montana is blessed with scenic beauty and diverse and abundant wildlife. We have much to lose if future development isn't done in a way that respects our natural resources.

Jacquelyn Corday
Missoula

Regarding "The High Price of Gas": Excellent coverage of oil and gas and other energy development

and its implications for wildlife. You did an excellent job of synthesizing the many impacts, including social ones, that come with such development. I've been going to Pinedale since the early 1970s and have seen the changes over the years. I was there just two weeks ago. What a mess.

George Wuerthner
Richmond, VT

Backhoe blues

Great work on the publication. I look forward to each issue and have found it's a great gift to friends and family in and out of Montana. I thought the article on riparian areas and floodplain development ("Too Close for Comfort?") was excellent. The lead picture of that mansion on the river was upsetting, and the sight of a backhoe in the river bottom was downright disgusting. For Montana anglers, the practice of "staying *below* the high-water mark" has become the norm to help protect and respect property owners' rights. It seems that some homeowners may need to get on board with the practice of "staying *above* the high-water mark" to keep things in balance.

Garrett Munson
Bozeman

I've vacationed in Montana eight of the last ten years, backpacking in wilderness areas and tent camping along the many wonderful rivers. Memories of the many landscapes are what keep me going most of the year. The picture of wing dams and a backhoe sitting in the middle of a river was one of the most obscene sights I have ever beheld. All I could think of is that for the sake of quick economic development, Montanans have sold their future. I hope you wake up before it is too late.

Dale Toltzman
Elroy, Wisconsin

Rowing safety

I thoroughly enjoyed my first copy of *Montana Outdoors*—no advertisements! The article by Neale Streeks, "Safely Down the Stream" (May–June) was well done and contained great information for all experience levels involved with rowing boats on rivers. One important item not mentioned was oar management near obstructions (rock gardens, logs, banks, etc.). Oars are the principal tool used in managing the boat, but they can become an impediment and even dangerous if not carefully managed near stream hazards. People often underestimate the incredible force that water exerts as it is flowing. I have observed and experienced oars getting jammed in a rock garden that resulted in broken equipment, capsized boats, and injury to the rower or passengers. When navigating through hazards, rowers should keep the oars pulled in and facing rearwards or upwards to avoid contact with obstructions.

William Schell
Federal Way, WA

Clarification

On page 12 of the May–June issue, in the article on fishing access sites ("Come on in, the Water's Fine"), we included a statement that some readers may have misinterpreted to mean that public stream access from a public bridge is legal only with permission from a landowner. That is not the case. Access to public waters from public bridges is legal in Montana and requires no landowner permission.

■ We welcome your comments, questions, and letters to the editor. We'll edit letters as needed for accuracy, style, and length. Mail your letter to: Montana Outdoors, P.O. Box 200701, Helena, MT 59620-0701. Or e-mail us at: tdickson@mt.gov.

TOM DICKSON

"Yes, Henderson, I can still see you. And yes, the McMillan report is still due on Monday."

CRAIG & LIZ LARCOM

Build, but not rest

Montana produces some of the nation's healthiest wildlife populations and greatest public hunting opportunities. But it might not for much longer. Social and economic changes threaten the state's strong traditions of wildlife conservation and public hunting.

Montana has done a remarkable job of restoring populations of elk, deer, pronghorn, and many other species that a century ago had nearly disappeared. A unique partnership of hunters, landowners, and state wildlife managers made that possible. Using hunters' license dollars, managers conduct extensive wildlife population surveys and develop science-based harvest regulations. Landowners across the state, who provide essential habitat and allow public hunting access, receive help from FWP and hunters on reducing wildlife depredation. Along with other Montanans, they also enjoy the sight of deer, elk, and other wild animals. Under this system of conserving wildlife, all partners contribute, and all partners benefit.

This arrangement has worked in large part because thousands of Montana landowners continue to allow public hunting. Their generosity is due to a combination of civic goodwill, support for America's democratic hunting traditions, and the assistance they receive in reducing wildlife depredation. But what happens when private gates begin to close? Many longtime landowners are finding that it makes more economic sense to sell or lease their land for exclusive hunting access than to allow public hunting, as their family has done for generations. And many new landowners, for a variety of reasons, simply do not want to deal with public hunting on their land.

Of course, that is their private property right. Yet by asserting that right, a growing number of landowners are cutting off public access to what the courts have ruled is the public's wildlife. Unlike in most countries, wild animals in the United States are owned by the public, not by landowners. Here, each state holds wildlife in trust for its residents. Public wildlife ownership is the founding principle of what's known as the North American Wildlife Conservation Model, which has resulted in the restoration of elk, deer, pronghorn, and other wildlife populations in Montana and across the United States. When the public owns and has access to wildlife, the public commits to conserving wildlife. When Montana's elk, deer, pheasants, and other wild animals are locked behind private gates, the collective willingness of Montana hunters to conserve those populations diminishes.

Is there a new way to manage wildlife that recognizes both private property rights and public wildlife ownership rights in light of the new realities of a changing social and economic landscape? That is one of the most difficult big game management challenges facing Montana today.

Public access remains one of this department's highest priorities. We also continue to be concerned about the growing commercialization of the public's wildlife. But experience shows that successful wildlife conservation works only if all parties are involved in working out solutions and all parties benefit from those solutions. Yes, we need to build on Montana's best conservation traditions, but we should not rest entirely on those traditions. New ideas that acknowledge today's social and economic realities will go a long way toward ensuring that the great wildlife conservation gains made in the last century will continue into this new one.

—M. Jeff Hagener, *Director, Montana Fish, Wildlife & Parks*

NATURAL WONDERS

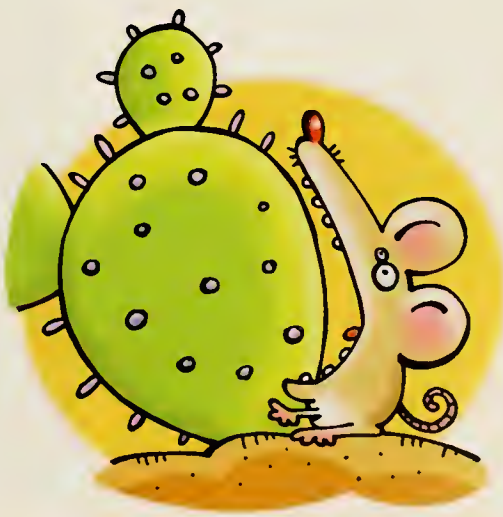
Illustration by Peter Grosshauser

Q ***I like to hunt ruffed grouse. Where can I find them in Montana?***

A This handsome, black-and-brown, midsized game bird with the explosive flush is found in many mountainous areas of central and western Montana. Look along stream corridors and bottoms that have a mix of conifers and deciduous trees such as aspen, willow, and dogwood. Ruffed grouse numbers are usually highest within thick stands of young aspen that have trunks the diameter of silver dollars.

Q ***While hunting antelope last fall, I saw what appeared to be small bite marks in some prickly pear cactus. Do any animals actually eat cactus?***

A Many do, says Ryan Rauscher, FWP native species biologist in Glasgow. "Cactus are delicious and nutritious, which is the reason they have spines. They are also a source of moisture, making them attractive to small mammals such as deer mice that can nibble around the spines. I have even heard that if the spines are burned off, cattle will eat them."



Bald eagle numbers have taken off in the three decades since DDT was banned, leading to their recent removal from the endangered species list.

ISTOCKPHOTO

FWP praises bald eagle delisting

Montana wildlife officials are hailing the recent decision by the U.S. Fish & Wildlife Service to remove the bald eagle from the federal list of threatened and endangered species.

"Montana's bald eagle population now stretches from border to border, east to west and north to south," says Jeff Hagener, director of Montana Fish, Wildlife & Parks. "The Yellowstone River once again has bald eagle nests along its entire length. Eagles occupy territories that have been vacant for more than 200 years. We think it was definitely the right decision to delist the bald eagle, and we're very proud of Montana's role in that recovery."

In 1963, the lower 48 states were home to only 400 nesting pairs of bald eagles. The raptor population had been ravaged by widespread use of DDT after World War II. The pesticide accumulated in the birds and caused them to lay eggs with weakened shells. Conservation-minded citizens pushed for the raptor's protection in 1967 under the predecessor to the Endangered Species Act (ESA). The bald eagle was one of the original species protected by the ESA, enacted in 1973. At that time, only about a dozen pairs were nesting in Montana.

Today, the lower 48 states are home to roughly 10,000 nesting pairs, a 25-fold increase over the past 40 years. Montana now holds 360 nesting pairs.

"The bald eagle recovery, along with the recovery of grizzly bears in the Yellowstone ecosystem and gray wolves in the Northern Rockies, shows that Montanans have a willingness to trust careful management, clean up their environment, and conserve and protect critical habitat," Hagener says. "Montanans can be very proud of these wildlife conservation achievements."

Bald eagles will remain protected under the Bald and Golden Eagle Protection Act and the Migratory Bird Treaty Act. The federal laws prohibit killing, selling, or otherwise harming eagles, their nests, or eggs.

Hagener notes that the biggest threat facing the state's bald eagles in coming years is increased development along lakes and rivers. "Bald eagles and humans both like water," he says. "About 75 percent of the state's bald eagle nests are within 500 yards of a river or lake. Conserving those critical habitats for nesting will be a huge challenge."

Grizzly captured by FWP goes to a zoo

A two-and-a-half-year-old male grizzly captured by FWP staff in late June is now living in a zoo in Colorado Springs, Colorado. The young bear had been hanging around homes and cabins in the Swan Lake area for several weeks, posing a threat to human safety. It was trapped by a crew led by FWP grizzly bear management specialist Tim Manley. The bear was shipped to the FWP Wildlife Center in Helena until the department could find a zoo willing to take it.

Manley says he and his crew had been trying to capture the grizzly for two weeks: "It moved around a lot, swimming back and forth across Swan Lake and frequenting the Crane Mountain area on the Flathead Lake side."

The 200-pound grizzly had been trapped near Swan Lake a month earlier after eating garbage and wandering around residences. FWP relocated the bear along Hungry Horse Reservoir. Within four days it had returned to the Swan Lake area and resumed entering garages, eating unsecured dog food, and rummaging through garbage.

The grizzly was not released back into the wild a second time because FWP determined it had become conditioned to human food and posed a severe threat to public safety.

Big bear captured near Choteau

In May, state bear biologists trapped a 750-pound male grizzly bear along the Rocky Mountain Front near Choteau. According to Mike Madel, FWP bear management specialist, it took two scales and a hydraulic crane to weigh the bruin, which stood 7½ feet tall and had 3½-inch claws on paws the size of dinner plates. "He's a beautiful bear," says Madel of the grizzly, which has a bronze head, golden back, and dark chocolate legs. The bear could now weigh as much as 900 pounds after feeding into the autumn months in preparation for hibernation. That would make the grizzly, estimated at eight years old, the second-largest male ever recorded in the Northern Rockies. Male grizzly bears along the Rocky Mountain Front average roughly 600 pounds, and females average 300 to 325 pounds.

Madel, who has been working with grizzlies along the Front for 24 years, says the largest bear he has ever trapped was an 8-foot-tall, 800-plus-pound male captured in 2003 at the nearby Blackleaf Wildlife Management Area. He thinks it's possible the first bear sired the one he recently caught. "That earlier large grizzly looked very much like this one," he says.

Madel captured the recent bear while trying to trap female grizzlies to fit them with radio collars. Researchers are tracking the bears' movements to better understand the animals' reproduction and survival rates. Madel says he didn't know such a big bear even existed in the area. He notes that the fact that such a large grizzly has been moving around ranches and other human habitation without causing problems shows that grizzlies usually try to avoid conflicts with people and livestock.

FWP grizzly bear specialist Mike Madel with the huge grizzly, one of the largest ever trapped in the Northern Rockies. Inset: the bear's massive paw.

MONTANA FWP

New on-line film features Big Hole conservation work

A new film profiling local efforts to restore the Upper Big Hole River is now on TERRA, an award-winning on-line website that features films about science and nature. *Fish and Cow: A Story of Restoring the Upper Big Hole Valley* is a 20-minute film showing ranchers and biologists working together to improve the Big Hole River fishery, home of the last river-dwelling population of native arctic grayling in the lower 48 states.

"Viewers will see how hard the ranchers on the Big Hole are working to address natural resource issues in the valley," says FWP grayling habitat biologist Pete Lamothe, who appears in the film. "They'll also see what's possible when folks work collaboratively to solve problems."

Bozeman filmmakers Geoff Stephens and Rick Smith produced the film this spring for The Nature Conservancy of Montana. Stephens is a 20-year veteran of NBC News, and Smith is a graduate student in Montana State University's Natural History Filmmaking Program.

Launched at MSU-Bozeman in 2005, TERRA is an on-line science and nature film site attracting roughly 12,000 to 15,000 viewers each day from around the world. To view *Fish and Cow*, go to lifeonterra.com and click the archive link.

Bigfork photographer Nick Fucci had to get down and dirty to capture this image of an American avocet in breeding plumage. He was photographing shorebirds at Freezout Lake, sitting on the mudflats next to the lake, when he noticed several avocets behind him in the grass. "The sun was sparkling in the dew, and I wanted to get the bird's eye view, so I just rolled over in the mud and began to shoot." ■

CREAM OF THE CROP

Montana's wildlife management areas encompass some of the state's finest habitat communities.

BY SAM CURTIS

When hungry elk began ransacking the haystacks and crops of Augusta rancher C. R. Rathbone, the depths of his frustration were evident in the advertisement he placed in the local newspaper: He asked for help from anyone willing to machine gun up to 1,000 of the ungulates.

That was in 1938. Whether the rancher found any takers or not, the elk massacre never took place. But the following year, still frustrated over increased depredation, Rathbone illegally killed an elk on his ranch. The case eventually went to the Montana Supreme Court, and in 1940 the rancher was convicted after the high court concluded that those who own land in Montana must accept "some injury to property or inconvenience from wild game for which there is no recourse."

Though it agreed with the ruling, the Montana State Fish and Game Commission, which was responsible for managing the state's wildlife, did not want to alienate farmers and ranchers. The Montana Legislature had earlier passed laws requiring the state wildlife agency to help landowners suffering losses from big game. Also, wildlife populations were finally on the increase, after hitting dismal and historic lows only a decade earlier. The commission didn't want to antagonize the agricultural community upon whose land the

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PUBLIC PASTURES. WMAs such as Ear Mountain, on the Rocky Mountain Front west of Choteau, were originally acquired in the 1940s and '50s as winter range for elk and deer herds. Today, wildlife managers view the wildlife areas as vital components of much larger habitat complexes for both game and nongame species.

state's deer and elk freely roamed and fed.

To meet both the court and legislative mandates, and also the needs of the wildlife it was entrusted to manage, the commission decided to purchase ranchland that contained prime winter range. Held in trust for the people and wildlife of the state, this habitat would help feed the growing numbers of deer and elk during the harshest time of year and forestall them from heading to ranchlands.

The first acquisition was in 1940, when the commission bought 1,004 acres of big game winter range in the Little Belt Mountains. That land became the foundation of the Judith River Wildlife Management Area (WMA), part of what has grown into a statewide system with more than 300,000 acres of wildlife habitat in dozens of WMAs spread across Montana. WMAs encompass all four of the state's ecotypes: intermountain grasslands, montane forest, plains grasslands and forest, and shrub grasslands. These biologically rich lands provide habitat for big game animals, waterfowl, and upland birds. WMAs are also home to warblers, raptors, furbearers, federally threatened species, and dozens of state species of concern, including the pygmy rabbit, western toad, and greater sage grouse.

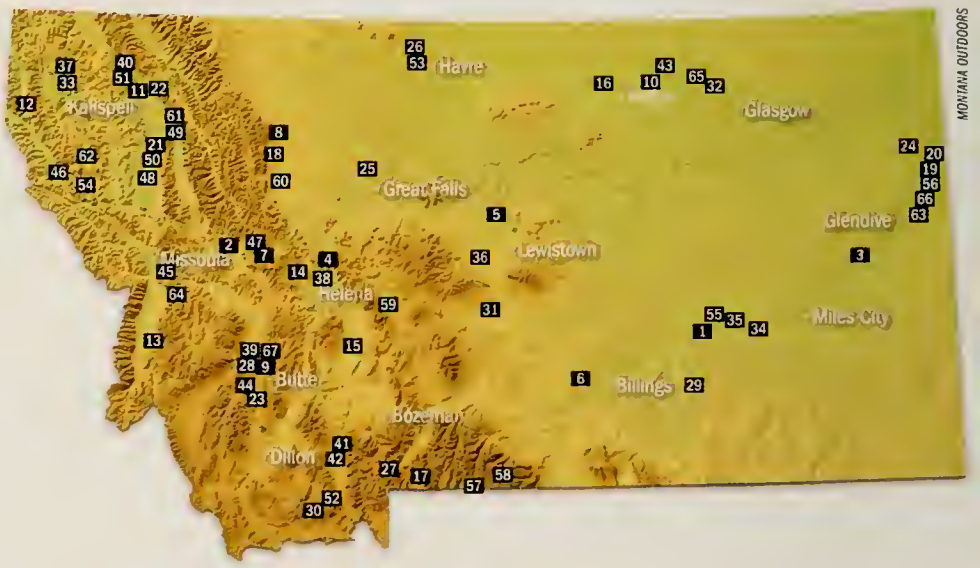
Funding for this vital game and nongame wildlife habitat has come from hunters, primarily through license fees and a federal excise tax on firearms and ammunition divided among states to conserve wildlife and wildlife habitat. Montana's WMA network, like those in many other states, is part of a nationwide wildlife population restoration system known as the North American Wildlife Conservation Model. Based on the objectives of protecting wildlife habitat and maintaining public access to wildlife, the North American approach has allowed the continent's wildlife populations to grow and expand despite growing and expanding human populations. "There's nothing quite like it anywhere else in the world," says Jim Posewitz, founder of Orion—The Hunter's Institute, a nonprofit organization promoting ethical hunting. "Hunters and hunting have created and sustained a conservation system that keeps wildlife as a public and sustainable resource that is scientifically managed by professionals."

Writer Sam Curtis lives in Bozeman.

When Montana acquired the first WMAs, the idea of restoring wildlife by protecting habitat was just gaining currency. Today, habitat conservation is accepted as the foundation of all wildlife management. The idea of what habitat is and how it works continues to evolve. As wildlife biologists recognize the interconnectedness of animal species and plant communities, they have begun to talk about WMAs in terms of entire habitat communities. "Instead of focusing just on elk winter range, we look at the broader intermountain grasslands," says Steve Knapp, chief of FWP's Wildlife Habitat Bureau. "Instead of just sage grouse habitat, it's the sagebrush-grasslands community. Instead of just pheasant hunting opportunities, we consider the entire riparian and wetland habitats and the great variety of wildlife all of these habitats support."

WMAs aren't just any old lands. "They tend to be cornerstones of larger complexes of wildlife habitat," says Mike Thompson, FWP regional wildlife manager in Missoula. "The WMA itself may comprise only 5 or

Montana Wildlife Management Areas



MONTANA OUTDOORS

(Acres in parentheses)

1 Amelia Island (239)
2 Aunt Molly (1,184)
3 Badlands (2)
4 Beartooth (31,947)
5 Beckman (6,568)
6 Big Lake (1,964)
7 Blackfoot-Clearwater (43,761)
8 Blackleaf (10,397)
9 Blue Eyed Nellie (164)
10 Bowdoin (156)
11 Buffalo Head Park (4)
12 Bull River (1,330)
13 Calf Creek (2,333)
14 Canyon Creek (2,210)
15 Canyon Ferry (5,129)
16 Dodson Creek (934)
17 Dome Mountain (4,789)
18 Ear Mountain (3,047)
19 Elk Island (948)
20 F Island (119)
21 Flathead Lake (137)
22 Flathead River (296)
23 Fleecer Mountain (7,394)
24 Fox Lake (1,546)
25 Freezout Lake (11,466)
26 Fresno Reservoir (2,802)
27 Gallatin (8,611)
28 Garnty Mountain (9,475)
29 Grant Marsh (99)
30 Gravelly-Blacktail (17,781)
31 Haymaker (1,321)
32 Hinsdale (255)
33 Horseshoe Lake (41)
34 Howard Valley (1)
35 Isaac Homestead (1,169)
36 Judith River (9,408)
37 Kootenai (2,549)
38 Lake Helena (157)
39 Lost Creek (1,403)
40 Lower Stillwater Lake (2)
41 Madison-Bear Creek (3,458)
42 Madison-Wall Creek (7,067)
43 Milk River (1,310)
44 Mount Haggin (58,188)
45 Mount Jumbo (120)
46 Mount Silcox (1,552)
47 Nevada Lake (740)
48 Ninepipe (3,880)
49 North Swan Valley CE (7,204)
50 Pablo (416)
51 Ray Kuhns (1,530)
52 Robb-Ledford (28,097)
53 Rookery (2,277)
54 Roundhorn (27)
55 Sanders (1)
56 Seven Sisters (560)
57 Silver Gate (3)
58 Silver Run (638)
59 Smith River (3,312)
60 Sun River (19,771)
61 Swan Lake (2)
62 Thompson-Fisher CE (142,000)
63 Three Mile (8)
64 Threemile (6,089)
65 Vandalia (310)
66 War Dance Island (12)
67 Warm Springs (1,563)

A MODEL WORTH MODELING Montana's WMA network is part of what's known as the North American Wildlife Conservation Model. Under this management system, which has restored wildlife populations to previously unimaginable levels, hunters have helped purchase critical wildlife habitats such as Mount Haggin WMA (above) and supported the science-based management of mule deer and other game species.

"Hunters and hunting have created and sustained a conservation system that keeps wildlife as a public and sustainable resource that is scientifically managed by professionals."

10 percent of that complex, but it provides a key component for wildlife survival."

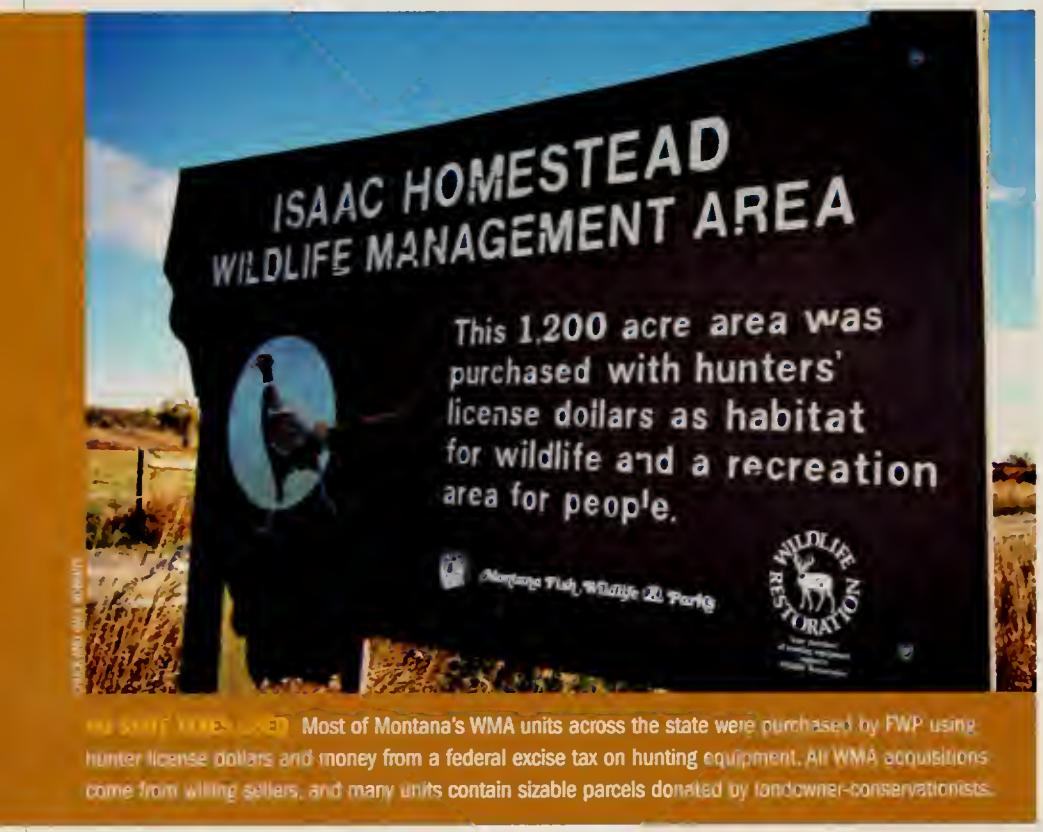
Thompson, previously manager of the Blackfoot-Clearwater WMA near Seeley Lake, says the same habitat that benefits deer and elk herds also benefits a wide range of other wildlife species, including those FWP has identified as "species in greatest need of conservation." For example, the Blackfoot-Clearwater WMA contains critical elk winter range but is also home to grizzly bears, bull trout, westslope cutthroat trout, and flammulated owls.

"WMAs can benefit species that are of growing concern to us today and still maintain our original objectives for species that first caught our attention, such as elk and waterfowl," says Knapp. "They really fit in well with the department's comprehensive approach to managing all wildlife species by managing broad ecological landscapes."

Montana's WMAs still help alleviate conflicts between agriculture and wildlife. That value is underscored each time Wyoming reports incidents of brucellosis in elk using feeding grounds. Wyoming maintains 22 of these public feeding areas, where wintering elk crowd together to eat state-provided food. The areas were established to block migrating elk from reaching historic winter ranges, where the wild ungulates compete with cattle for forage. The crowded conditions on feeding grounds make the elk more susceptible to diseases such as brucellosis. Montana chose a different approach by purchasing WMAs, which are natural feeding grounds.

That's not to say free-ranging wildlife stay off private land. Deer and elk are oblivious to boundaries, and many continue to feed on adjacent ranchlands, sometimes causing severe depredation problems. Years ago, wildlife managers came up with an innovative—and at first controversial—solution: Allow, on some WMAs, carefully managed cattle grazing. One of the first sites for this experiment was Fleecer Mountain WMA near Divide. Wildlife managers worked with local ranchers to rotate cattle grazing between a pasture on private land and WMA pastures to periodically rest vegetation so it could regenerate. According to Mike Frisina, manager of the WMA at the time and now the FWP range/habitat coordinator, this rest-rotation grazing system on and next to WMAs improves the forage on private land both for the rancher's cattle and the deer and elk that feed there in winter. Another benefit is that cattle grazing, in some cases, actually improves wildlife forage on WMAs. "When we have a lesser-quality grass such as smooth brome that gets too coarse for elk and deer, having it periodically grazed down by cattle improves the palatability, and game animals will go in and use it," Frisina says. Over the past 20 years, several ranchers with lands next to WMAs have entered into grazing agreements with FWP that improve the quality of forage for both cattle and wildlife over entire landscapes. "I guess we've matured along with our WMAs," says Frisina. "By integrating management of our WMAs with adjacent private lands, we're improving the situation for wildlife."

Another way FWP integrates WMAs into local neighborhoods is by making property tax payments and aggressively controlling weeds to prevent their spread to nearby agricultural lands.


ISAAC HOMESTEAD
WILDLIFE MANAGEMENT AREA
This 1,200 acre area was purchased with hunters' license dollars as habitat for wildlife and a recreation area for people.
Montana Fish, Wildlife & Parks
WILDLIFE RESTORATION
Most of Montana's WMA units across the state were purchased by FWP using hunter license dollars and money from a federal excise tax on hunting equipment. All WMA acquisitions come from willing sellers, and many units contain sizable parcels donated by landowner-conservationists.

Biologists and scientists with FWP and other agencies and institutions often conduct research and habitat management experiments on WMAs. In one study, University of Montana researchers discovered that aspen stands on the Blackfoot-Clearwater WMA provide essential habitat diversity for a variety of wildlife species, including cavity-nesting birds. FWP wildlife managers responded by fencing many stands to prevent elk from browsing the trees. Also on the Blackfoot-Clearwater, FWP has been studying the use of insects to control knapweed and other harmful invasives without damaging native flowering plants. "We're transitioning to what is called 'biological control' in areas where chemicals are harming forbs," says Thompson. "Forbs are part of the food chain for insects and a variety of wildlife."

Though managed foremost for the benefit of wildlife, WMAs accommodate a wide range of recreational uses. Ninepipe WMA, south of Pablo, has outstanding pheasant and waterfowl hunting on its 3,950 acres of restored and enhanced wetlands and the adjoining grain fields sharecropped by local farmers. Archery and rifle hunters stalk elk, moose,

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BROADER RANGE AND SCOPE WMA acquisitions have branched out beyond Rocky Mountain foothills to include key habitat parcels in a wide range of ecosystems. Above: Elk Island WMA, in eastern Montana on the Yellowstone River. Wetland-rich WMAs such as Ninepipe and Freezout (below) have greatly benefited waterfowl and other winged wildlife.

"These areas tend to be cornerstones of larger complexes of wildlife habitat. The WMA itself may comprise only 5 or 10 percent of that complex, but it provides a key component for wildlife survival."

NEAL & MJ MISHLER

mule deer, white-tailed deer, and pronghorn on the sprawling 58,188 acres of Mount Haggin WMA, the largest in the system. Like other wildlife management areas, the numerous units of the Milk River WMA in Phillips County offer excellent hunting as well as wildlife watching, which continues to gain participants each year. "Hunters know where the WMAs are, and they use them all," Knapp says. "But we're also seeing more birders, photographers, and others keying in on these areas." Beartooth WMA, north of Helena, is popular with horseback riders and hikers. Freezout WMA, west of Great Falls, is a nationally renowned waterfowl viewing area. "Freezout is a particularly accessible WMA," says Knapp. "I go up there each spring with my mother, who turned 90 this year," "She can see huge flocks of waterfowl from the vehicle. "

WMAs account for just one-third of 1 percent of Montana's total land base. That's not much wildlife habitat, especially when considering the increasing acreage of land surrounding WMAs being bought for subdivisions. The fast-growing development fragments the habitat that many species on WMAs use at various times during the year. "With land prices climbing the way they have, it gets harder and harder to buy new WMAs or expand the borders of existing ones," says Jeff Herbett, assistant chief of FWP's Wildlife Division. "That's why the department has begun trying to broaden the 'footprint' of WMAs in order to secure high-quality habitat over a broader landscape."

To expand the effects of WMAs, FWP purchases conservation easements from willing sellers on private lands containing prime habitat abutting the state lands. FWP pays a lump sum in exchange for the landowner agreeing to limit development and carry out land improvements, such as rest-rotational grazing, that help wildlife. In many cases, landowners have sought out the easements, recognizing benefits to both the WMA and their own property. "One landowner sold us a conservation easement on property where a future owner could have built homes right up against the Blackfoot-Clearwater WMA boundary," says Thompson. "We didn't want that to happen, and neither did he. The conservation easement was a perfect solution."

Such creative approaches to protecting habitat are becoming increasingly important. Each year more houses, shopping malls, and fences are built on lands across Montana that for thousands of years have provided wildlife habitat. "Wildlife is a public resource, but in much of Montana, most wildlife lives on private land," says Herbert. "We probably will never be able to replicate the acquisitions we made in the mid-20th century and vastly expand our WMA system. But by working with landowners adjacent to these critical habitats, we're trying to leverage the tremendous wildlife value of WMAs and expand their effectiveness."

Because WMAs are managed principally for the benefit of wildlife, they are closed from December through May. For specific opening and closing dates as well as other WMA regulations, maps, and management information, visit the FWP website at fwp.mt.gov.

The Human Side of WMAs

In addition to their history as a place for wildlife, all WMAs carry a unique story of the people who have used, valued, and managed them.

Many WMAs were once hunting grounds for American Indians. Later these rich lands attracted trappers and then pioneers. Homesteaders, who obtained the lands from the federal government, worked to carve out a living in often brutal conditions. The property entered state ownership when it went up for sale, and local conservationists saw an opportunity to preserve the habitat for the long-term benefit of wildlife.

Kootenai WMA near Libby and Mount Silcox WMA near Thompson Falls were acquired from conservation-minded families to protect habitat for local bighorn sheep herds. Local hunters and other conservationists led the effort to acquire Sun River WMA, which provides winter range for Montana's largest elk herd outside Yellowstone National Park. Blackleaf WMA, along the Rocky Mountain Front near Bynum, was historically used by the Blackfeet and other Indian tribes; tepee rings and travois trails are still visible. Elk Island WMA and Seven Sisters WMA, on the Yellowstone River between Sidney and Glendive, were likely named during an excursion by the steamboat *Key West* up the river in 1873. FWP secured the Milk River WMA near Nelson Reservoir after local hunters, other conservationists, and landowners recognized the great wildlife potential of the bottomlands, at the time owned by the Bureau of Reclamation.

"THE TRAPPER'S HOME," BY RICHARD THROSSEL, CIRCA 1905. WESTERN HISTORY/GENEALOGY DEPARTMENT, DENVER PUBLIC LIBRARY

Many Montana WMAs have been valued as prime hunting grounds for centuries.

Other WMAs have similar stories. The histories recount how concerned Montana citizens and FWP staff worked closely with existing landowners to ensure these habitat gems continue producing wildlife and providing recreation far into the future.

—Tom Dickson

BIGGER FOOTPRINT Because WMAs cover very little of Montana, wildlife managers try to broaden each area's "footprint." They acquire conservation easements on adjacent private land and work with ranchers on progressive grazing systems, such as those employed on Madison-Wall Creek WMA (above). Expanding the scope of WMAs creates healthier habitat for game animals as well as nongame species of concern such as the white-faced ibis.

"It gets harder to buy more WMAs or expand their borders. That's why the department has begun trying to broaden the 'footprint' of WMAs, in order to secure high-quality habitat over a broader landscape."

The Golden

ADAM VAN ZEE

Legacy of "Hunter Ed"

Sputnik went up, McCartney met Lennon, and Montana began an education program that over the past 50 years has helped 300,000 hunters become safer and more responsible in the field.

BY ANDREW McKEAN

It was 50 years ago this fall that Dustin Hill and a dozen other teenagers gathered in a Nashua, Montana, classroom and learned how not to shoot each other.

Hill and his classmates were students in the first mandatory hunter education class offered in this small northeastern town. In church basements, civic centers, rural schoolhouses, and even living rooms across the state in 1957, other young hunters were also learning how to handle guns safely. The scene has been repeated thousands of times in what has become for many young Montanans a rite of passage—and for state officials, parents, and instructors an essential measure for reducing hunting accidents.

This year marks the golden anniversary of Montana's Hunter Education Program (commonly known as Hunter Ed). For the past five decades, thousands of volunteer instructors have donated their time to teach youngsters the basics of firearm safety, hunting ethics, and game animal identification. More than 300,000 kids and thousands of adults have graduated from the program. During that time, Hunter Ed has continued to improve, maintaining the core elements developed half a century ago while incorporating new instructional techniques and course content to keep pace with the ever-changing face of Montana hunting.

The early years

Montana's first Hunter Education students were a mix of farm kids who had grown up shooting cans and gophers, town kids who had never held a gun, and adults who wanted to learn more about ballistics and firearm anatomy. The instructors were their neighbors. Some were experienced

hunters, others gunsmiths and competitive shooters, and others game wardens and wildlife biologists. Some instructors had learned about firearms from military service. And some volunteered to teach because they had kids in the class.

Youth firearm safety instruction in Montana and across the United States began in response to a growing interest in hunting and a subsequent increase in hunting accidents. In those early years of the Eisenhower Administration, the country was becoming more prosperous as the post–World War II economy hummed along. Families had more leisure time for recreation and more money to pay for it. Sporting goods such as tents, backpacks, and rifles—often military leftovers—were cheap and abundant. And the new science of wildlife management was helping big game and waterfowl populations rebuild from the alarmingly low numbers of just a few decades earlier.

Pat McVay, who had been teaching firearm safety to young shooters through the National Rifle Association's (NRA) Junior Rifle Program, was one of the state program's first instructors. "After the war, we had a lot more people interested in shooting, and a lot more first-time hunters," says McVay, a Flathead Valley resident. As a result, he explains, hunting accidents increased, "especially back East, where the population was higher and the cover more dense. Through the NRA, I started hearing that some Eastern states were starting mandatory programs to reduce the number of accidental shootings."

> "Many of our earliest instructors were veterans of World War II or the Korean War....They were totally committed to firearm safety and making sure young hunters knew how to properly handle a gun in the field."

Successful lobbying

Believing compulsory education would benefit Montana hunters, McVay started thinking of ways to expand hunter education from teaching simple marksmanship and gun handling to also including safety in the mountains and basic woodsmanship skills such as fire building. Working with Mel Ruder, a trailblazing newspaper publisher in Columbia Falls, McVay successfully lobbied the Montana Legislature to create a hunter education program, funded with money from hunting licenses and administered by what was then called the Fish and Game Department.

The initial Hunter Ed classes of a half-century ago marked the first time in Montana that prospective hunters were taught about gun safety in a formal context and by someone other than a father or family friend. The instructors, volunteers from every walk of life, turned briefly away from jobs and families to teach the students about muzzle control, shot selection, and the differences between lever and bolt-action rifles. "Many of our earliest instructors were veterans of World War II or the Korean War," says Thomas Baumeister, who administers Montana's Hunter Education Program. "They knew how to handle firearms and they

HAPPY HALF-CENTURY! 50 years of sending safer hunters afield

Over the past 50 years, Hunter Ed instructors have taught 300,000 kids the finer points of firearm safety, responsible hunting, game identification, wilderness survival, and more. Many students have gone on to become instructors themselves.

Late 1940s: Montana begins offering voluntary hunter safety courses.

1957: The Montana Fish and Game Department conducts the first mandatory hunter education classes.

1970: The Federal Aid in Wildlife Restoration Act (Pittman-Robertson Act of 1937) is amended to provide federal funds for state hunter education programs and the development of public shooting ranges.

1991: Montana Fish, Wildlife & Parks begins offering a separate bowhunter education course, mandatory for all first-time archery hunters in Montana, regardless of age.

1940 | 1950 | 1960 | 1970 | 1980 | 1990 | 2000

1949: New York state and the National Rifle Association establish the first hunter education program.

1957: The Montana Legislature passes a law making it mandatory for hunters under age 18 to graduate from a hunter education course before buying a big game license.

1963: The Montana law is amended so that no resident hunter under 18 can buy a hunting license (including those for birds) without a certificate showing completion of a Hunter Ed course. The law is further amended in 1973 to extend to nonresident juveniles.

2000: Montana Fish, Wildlife & Parks expands the Hunter Education Program to encourage ethical hunting and conservation practices through advanced hunter education classes, outstanding hunter behavior acknowledgment, and the youth "one-shot hunter" award program.

2007: FWP celebrates Hunter Education's golden anniversary. It inducts five instructors into a new Montana Hunter Education Hall of Fame.

knew—sometimes firsthand—the damage guns could do. They were totally committed to firearm safety and making sure young hunters knew how to properly handle a gun in the field."

The first classes used educational materials borrowed from the NRA. Instructors drilled into students the three cardinal rules of gun safety: Always point the muzzle of your gun in a safe direction; always treat every gun as if it were loaded; and always be sure of your target and beyond. They also taught how to tell a mule deer from a white-tailed deer, how to safely remove a rifle from a vehicle, and other important lessons.

Over the decades the program has evolved to also include safety instruction such as outdoor survival and hunting from tree stands; bear identification (so that hunters will not inadvertently shoot federally protected grizzlies); and landowner relations, increasingly important as the amount of private land available for hunting has declined. Montana's Hunter Education course has stressed the importance of personal responsibility by coaching potential hunters on how to make ethical decisions in the field. FWP added a separate course, devoted to bowhunter education, in 1991.

Graduation from a Hunter Ed course became mandatory for all hunters under age 18 in 1957. In the last decade the legislature amended the law to require anyone born after January 1, 1985, to take the course before they can purchase a Montana hunting license. Bowhunter education is required of all first-time archery hunters in Montana, regardless of age.

Constant commitment

Despite the continual improvements and additions, the core portions of the Hunter Education Program have remained in place throughout the decades, says McVay. "We've added new elements such as responsible ATV use, ethics, landowner relations, and the fourth cardinal rule of gun safety [always keep your finger off the trigger until you're ready to fire], but the program has stayed the same more than it's changed," he says.

One of the constants has been the commitment of volunteer instructors. Five of the original instructors—McVay, former Olympic smallbore shooter Lones Wigger of Carter (who died this past summer at age 91), George Rice of Big Sandy, Don McKee of Powell County, and Lake County's Robert Larsson—were inducted into the new Hunter Education Hall of Fame earlier this year as the program's first 50-year veterans. Roughly 1,500 instructors teach the course across the state each year. "This program is run with and by volunteers," says Baumeister. "Montana Fish, Wildlife & Parks administers the program with the equivalent of just two full-time paid employees. There is just no way we could deliver first-class education to about 6,500 students annually without these citizen volunteers."

By program policy, Hunter Ed classes must be at least 12 hours long, but many courses extend to 16 and even 18 hours. They're generally conducted during evenings in early spring and late summer and include a weekend field day. Instructors spend hours prepping for the course and supplement course materials with their own firearms, hunting packs, survival gear, binoculars, and other personal items. They receive no financial compensation.

"I find it amazing that Hunter Ed instructors are so passionate and involved in the program," says Baumeister. "We do no recruitment—none—yet every year we have a good pool of instructors to draw from. Why is it that volunteer participation in Hunter Ed is thriving when you hear that other civic organ-

SERIOUS BUSINESS For many young Montanans, Hunter Ed class is a rite of passage into adulthood. The students take their instruction seriously. Upon completing the course, they may purchase hunting licenses allowing them to harvest elk, deer, pronghorn, and other big game.

ADAM VAN ZEE

PASSING THE TORCH Many Hunter Ed instructors have reached hunting's "philosopher stage." They've mastered the art of hunting and feel a need to pass their knowledge and wisdom on to a new generation. "They want to see the hunting tradition continue," says one senior instructor.

ADAM VAN ZEE

izations are losing members?"

Part of the answer is tied to the instructors' passion for hunting. Whether they're motivated by a love of guns, wilderness, or wild animals, adult hunters of a certain age are often compelled by a need to reinvest some of themselves back into the source of their inspiration. (That trajectory of a hunter's maturity is actually detailed in Montana's Hunter Ed manual, which defines five typical stages of a hunter: Hunters often begin as shooters, interested mainly in marksmanship; as they become more competent, they focus on shooting a limit of game; then they graduate to a more selective stage, hunting for large-antlered trophies or a particular species; later in life, hunters often challenge themselves by using more-primitive equipment, such as muzzleloaders or bows; and finally, many hunters enter the "philosopher stage," characterized by a desire to pass on their accumulated knowledge and passion to a new generation.) "Most instructors don't want payment and would be insulted if you tried to pay them," says McVay. "Oh, they like ro be recognized and get a plaque every few years, but they're passionate about hunting and they want to see the hunting tradition continue. They know the only way to do that is through a new generation of competent hunters who care as much about it as they do. That's their payment." Baumeister, himself an instructor, adds that volunteers who teach hunter education often receive another type of compensation years later: a graduate's story about a safe and enjoyable hunt.

Shared ownership

Many instructors point to their sense of shared ownership in the program as a reason for their devotion. FWP provides guidance and course materials—funded mainly by a federal tax on hunting equipmenr that's distributed to state wildlife agencies. The state also certifies instructors, keeps them informed of new teaching methods, administers student records, and adjusts the program to meet new social, legal, or other require-

Andrew McKean manages FWP's regional Information and Education Program in Glasgow.

> "All the kids I graduate have to demonstrate to me that they're safe enough that I would hunt with them—and I'm pretty picky about my hunting partners."

ments. But the instructors have great latitude in how they teach. Some read verbatim from the FWP manual, while others barely refer to the text, preferring a more free-form educational approach. As long as they teach the materials well and cover the required curriculum, FWP doesn't interfere with an instructor's personal teaching style. "It's a balance," says Baumeister. "FWP is legislatively charged with administering the program. But if we rigorously controlled the program, the instructors would have less passion and ownership. Hunter Ed has been deliberately designed so our instructors can build it and own a good chunk of it."

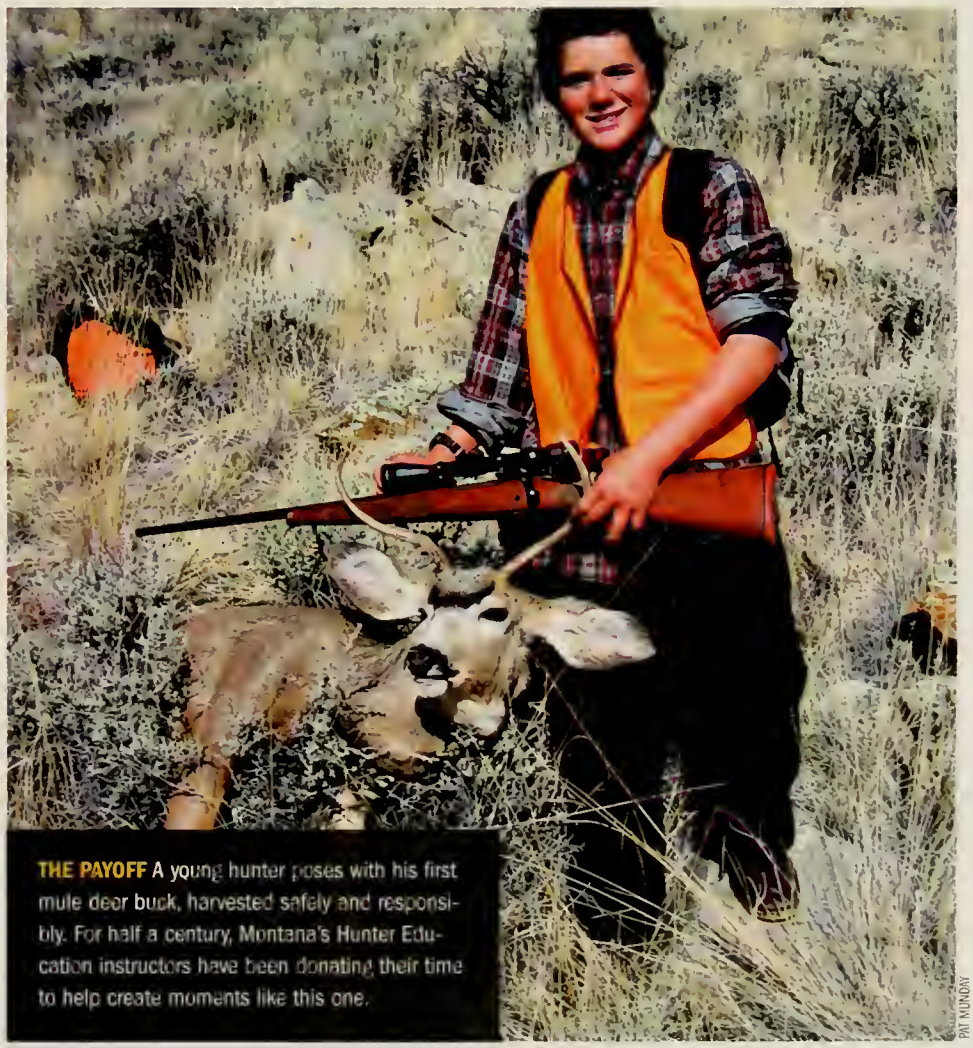
Occasionally that delicate balance gets thrown off. Earlier this year, the Montana Legislature proposed lowering the minimum age to hunt to nine—something FWP supported because it offered the opportunity to recruit young hunters before they become distracted by video games and other pursuits. Hunter Ed instructors mobilized to defeat the bill. "Nine years old is just too young to hunt competently, and I wouldn't have that conclusion if it wasn't for the years I've spent in the classroom with 12-year-olds," says Joe Yeoman, a Fort Peck instructor. "We're teaching the kids, but they're teaching us, too, about what teaching techniques work and how much information they can absorb."

McVay's measure of a competent graduate is whether the young hunter would be safe, knowledgeable, and ethical in the field. "All the kids I graduate have to demonstrate that they're safe enough that I would hunt with them—and I'm pretty picky about my hunting partners," he says. "Passing the paper test doesn't mean that they'll pass the Hunter Ed course. It's how they conduct themselves with a real gun—conduct we measure on the field course—that determines whether they'll pass."

To ensure his students absorb the weighty subject matter, McVay insists on attentiveness. "In one of my very first classes, a girl wouldn't pay attention and was disruptive," he says. "I asked her to leave and come back next year when she was ready. She did, and she became a very good student. Then she got married and brought her own daughter to my program. Then that daughter brought her daughter. That really tickled me."

Dustin Hill, who was the young Nashua student in 1957, has a similar long-term investment in the program. After graduating from college, he started a long career as a public school teacher and administrator. Like many Hunter Ed graduates, Hill became an instructor. For the last few decades, most recently in Scobey, he has been his county's lead instructor. Now retired from the school system, Hill says he views the hunter safety class as a way he can continue teaching and working with Daniels County youngsters. "I can't say that I would not be a Hunter Ed instructor without taking that class all those years ago," he says. "But the class confirmed to me that I wanted to be a hunter, and then an educator, so it was a pretty easy choice to bring the two together as a Hunter Education instructor."

How long the four original instructors will continue combining their interest in hunting and education is anyone's guess. After 50 years, McVay still teaches a course every year and intends to continue until he can't. "If you're having fun and making a difference with kids," he says, "why quit?"



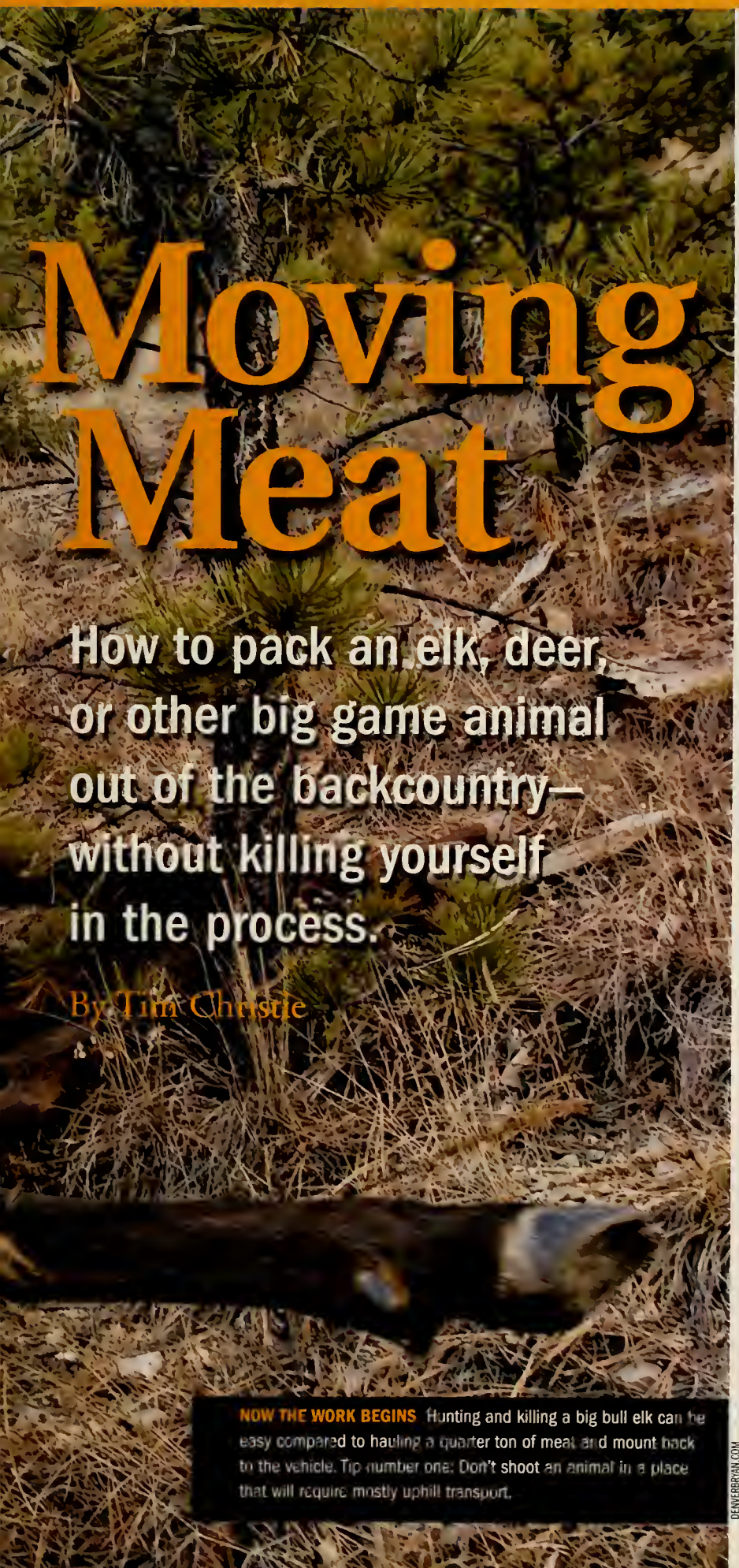
THE PAYOFF A young hunter poses with his first mule deer buck, harvested safely and responsibly. For half a century, Montana's Hunter Education instructors have been donating their time to help create moments like this one.

PAT MUNDAY

Moving Meat

How to pack an elk, deer, or other big game animal out of the backcountry—without killing yourself in the process.

By Tim Christie



NOW THE WORK BEGINS Hunting and killing a big bull elk can be easy compared to hauling a quarter ton of meat and mount back to the vehicle. Tip number one: Don't shoot an animal in a place that will require mostly uphill transport.

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Silver dollar–sized snowflakes floated down from opaque skies. With each step I expected to see a patch of buff that would indicate an antler. Despite the storm's intensity, the edge of each cloven hoof print in the fresh snow was razor sharp. I'd never killed an elk, but years of deer hunting told me these elk were real close.

The game of hide-and-seek had begun two hours earlier when I'd spotted the tracks from my truck. I grabbed my rifle, a small daypack, and an ancient wooden pack frame. The tracks meandered up a creek bottom then turned up a steep hill. Attempting to keep my footing, my focus slipped from hunting. Then something told me to look up. An elk faded in and out of my vision through surrealistic streams of cascading snow. Kneeling, I slipped off the scope covers and shouldered my rifle. All I could see was white. Had I been dreaming? Walking to where I'd seen the mirage, I saw tracks going off a ridge and falling precipitously into obscurity. I realized the game was lost.

Five years later, my elk hunting luck had yet to match my enthusiasm. Deer filled my meat needs, but dreams of tagging an elk were simply that. Late one afternoon, lured by bugles of a love-sick bull, I slipped quietly through dark timber shadows. There, in a small opening, he lay bedded, making for an easy shot. What had been elusive for so many years was over. Approaching him, I was struck by a simple fact: Elk are huge! How was I going to get him to my truck? Then another realization washed over me. Had I shot that snowstorm elk five years earlier, I'd never have gotten it out. Inadequate equipment, snowy conditions, and being alone all added up to not being anywhere near prepared for hauling several hundred pounds of meat from the backcountry. Since I was raised hunting mule deer and pronghorn in western sage plains, all I knew of retrieval was grabbing an antler and dragging the animal

THE LONG HAUL Pulling or packing a big game animal can strain a hunter's lower back, knees, and heart. The hardest way to move a deer or elk is by dragging it, bent over, across the ground (far right). A plastic sled or tarp can make the job much easier, especially when there's snow on the ground. Ideally, a pack train is standing by to do the work for you.

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to the truck. Deer shot near fields were even simpler: Drive the truck to the buck. I'd been spoiled. Elk hunting, I realized, was different.

Since then, on hunts from Texas to Alaska, I've observed that most hunters spend far more time thinking about getting a perfect shot than on how they will retrieve what they shoot. Consider my friend Tom's nightmarish introduction to elk hunting. His hunting mentor was a consummate braggart. There was nothing this guy didn't know how to do. After dropping into a steep canyon, the pair hunted for several hours before encountering a small band of elk. Tom shot a cow. After quartering and hanging the elk, they struggled to get out of the canyon before nightfall. Mr. Modesty assured Tom his horse would pack out the whole elk. But when summoned to the canyon headwall, the horse smartly refused to go where no horse should go. Backpacking the elk out became the only option. Four days of missed work and brutal exertion got the hindquarters out. But that was all the meat they recovered; the rest spoiled. The moral: Many inhospitable places where game animals live are not good places to hunt game animals.

Getting a deer or elk out can be as simple as strapping it to the back of a horse, or as taxing as horsing it out on your back. Your choice requires prehunt preparation and planning, just like all elements of a hunt. Disaster awaits those who don't plan, something a friend discovered last fall. You'll never find a better-conditioned young man—one tough enough to survive being wounded in the Middle East. On their elk hunt, he and three buddies got lucky when one of them dropped a spike bull. But the elk ended up in a hellish snarl of downfallen timber 200 yards from a road. The young men didn't carry tools to quarter the gutted carcass. Their solution? Use testosterone-fueled brute strength to manhandle the elk to the road. A week later my friend was in a chiropractor's office getting his third spinal adjustment. One of his buddies also sustained a potentially life-altering back injury. Thinking about how you will recover your game before you shoot can prevent more than wasted meat.

The bigger the animal, the more time you should spend on planning how you'll retrieve it. A common joke among state biologists in Wyoming, where I often hunt, is that the reason successful hunters must wait five years to apply for another moose permit is because that's how long it takes to forget the pain endured from retrieving a moose. Elk aren't much smaller. One of my hunting partners figures that backpacking elk meat out is the closest thing to childbirth that a male can experience. And the longer the pack, the harder the labor. Recalling his ordeal of the previous fall, he once wrote me, "We backpacked the bull a mile to the rig. When you stand up with a 118-pound hindquarter strapped to your backpack, it spreads pain evenly throughout your entire body. Legs turn to rubber, toes go black from being beaten into the front of your boots with every step

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Tim Christie, who grew up hunting in Montana, is a freelance writer and photographer in Coeur d'Alene, Idaho.

downhill, and your back can't comprehend that your shoulders and hips are separated, because they aren't after a mile of packing such loads. Packing uphill quadruples the pain."

TIM CHRISTIE

Horses make sense

For packing game long distances, horses are my top choice. Mules, llamas, and even goats fall into the same category of beasts packing the burden, and each animal has its fan club. Of course, pack animals have their downsides. You must feed them year-round just so they can provide a week or two of work. And you need to add the costs of a trailer and the saddles, panniers, and other tack. But it's worth the effort and expense. Nothing is sweeter than putting elk quarters on the back of a horse and leading it to camp. It's only better if you're riding another horse.

Both dragging and backpacking big game animals share one common element: sweat. Backpacking, while strenuous, offers the significant plus of cleaner meat. I've never dragged an animal any distance without getting brush, sage, or dirt imbedded in the animal's meat and chest cavity. It's a messy affair. Last fall I killed a big mule deer buck in Montana over a mile from the truck. Since it was all downhill, my partner and I considered dragging the deer to the vehicle. But because we wanted to keep the meat clean, we instead skinned, quartered, and packed it out. That took more time but produced much better table fare.

Here are a few backpacking tips from a hunter who has been carrying game out for 40-plus years: Use a sturdy aluminum pack frame with a shelf, which supports the weight of the meat and bone. A good pack also helps keep you stable under the awkward mass on your back. Use two walking sticks or ski poles for additional stability and an extra measure of safety.

When done correctly, dragging can be a good option. Unfortunately, most hunters grab a front leg or an antler and strain their leg and back muscles as they pull the animal to their vehicle. It's just plain awkward. By walking and pulling at odd angles, they twist their spine, potentially damaging ligaments and straining discs. Fortunately, someone has invented a better approach. It's a strap system, similar to that used for a plow horse. Slip a harness over your shoulders and then walk straight ahead, pulling the animal directly behind you with the weight distributed evenly between your shoulders. No twisting or bending required. Some harnesses also have a hip belt, which makes the hauling even less grueling.

NO BONES ABOUT IT

Most hunters could not pack out a deer on their back in one trip. But they likely could if it was just the meat, without the bones and hide. That's the logic behind what's called gutless field dressing or in-the-field boning. With this butchering method, you don't gut out your deer, pronghorn, or elk but rather peel back the hide and fillet the meat off the bone. You can even get the tenders this way by reaching in behind the stomach and pulling them away from the inner vertebrae with your fingers. Some hunters don't like this method because they say it increases the temptation to leave good meat behind, such as in the neck and between the ribs. Others warn that unless it's tightly bound to the frame, loose meat shifts in a pack much more than when the muscle is attached to the bone.

Whenever transporting big game, state law requires that you attach the validated possession tag to the largest part of the animal "in a secure and visible manner," retain evidence of the animal's sex, and take all usable meat.

"You must make sure that a warden will be able to identify the animal in the 'package' of any boned-out animal you are transporting," says Mike Korn, assistant chief of the FWP Enforcement Division.

The Alaska Department of Fish and Game has produced an excellent video on gutless field dressing called *Field Care of Big Game*. It's available for $15 by calling (907) 267-2187. To view a slide show demonstrating how to bone out an elk in the field, go to: http://home.att.net/~sajackson/gutless1.html.

JIM HERRLY

—Tom Dickson

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TIM CHRISTIE

DANIEL LAMORELLE

JIM HERRLY

WHY DIDN'T I THINK OF THAT? Ever since the first cave men figured out that pulling a dead mastadon was easier than pushing it, hunters have been devising new ways to transport game animals. Clockwise from top left: Canoes and other watercraft can carry heavy loads long distances; when used responsibly, an ATV is a sensible way to pack out a deer or elk; commercial and homemade devices such as carts and caddies are lightweight and easily transported; sometimes all you need is rope and a log to haul two heavy elk quarters overland. Facing page, upper right: the final destination.

Pulling a deer or an elk quarter is even easier if there's a skiff of snow on the ground. Snow allows you to use a plastic sled or tarp. A tarp is especially handy because you can easily stow it along with a length of rope in your daypack. After cleaning the deer, wrap it in the tarp, loop the end of the rope around your waist, and glide the carcass across the snow. The tarp also keeps sage, dirt, and other debris from getting into the meat.

Wheel 'em out

Hunters have invented all types of wheeled carts and carriers for retrieving game. On a mountain goat hunt, my partner and I backpacked 5 miles into a high country lake, where we set up a base camp. The trail was relatively flat, so we wheeled our gear in on a cart. The homemade device had a motorcycle wheel in the center and two handles in front and two in back. On the third day of the hunt I shot a goat, and we backpacked the quarters, cape, and head down to our base camp, about 2 miles away. The next day we merrily wheeled

the goat and our camp gear the 5 miles back to the trailhead in one trip. I didn't weigh the load, but I suspect it exceeded 350 pounds. Similar carts are available commercially, both in one- and two-wheel versions. Some hunters improvise and strap their deer or pronghorn to a bicycle and wheel it across the prairie or down a logging road. One friend even used a wheelbarrow to haul out a moose, one quarter at a time.

ATVs offer an efficient way to retrieve game, but they should be used responsibly. Unfortunately, too many hunters tear up the terrain with their vehicles. Last fall I transported a whitetail buck to camp on my ATV, but only after dragging him to an old logging road. I could have driven my pickup to the deer, but the road was narrow and overgrown. The ATV allowed me to reach the deer without driving in with my truck, which would have widened the road, inviting even more vehicles to drive in.

On a guided sheep hunt years ago, I made a good shot on a ram. After three hours of boning the meat and caping the trophy, my guide and I hoisted heavy, leg-numbing packs and toiled back to our spike camp,

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arriving long after dark. The next day, as we were packing the ram to our vehicle, 4 miles away, I was worried that a grizzly might surprise us, attracted by our blood-soaked packs. It wasn't long before I wished the ordeal over—no matter how it ended. Three days and as many round trips later, we dropped our packs into the truck. Exhausted, sitting on the tailgate, I tried to drink a cold beer. My arm refused to lift the bottle to my mouth, it hurt that much.

It's been ten years since that hunt. When I look at the ram on my office wall, rich memories of my adventure in that faraway place filled with mountain cirques flood back. My most vivid memory is not of the kill; it's of that moment I knew my guide and I had gotten the sheep and camp safely out of the mountains. Good hunts test both body and mind. Getting the game out is a test of the kind of hunter you are. One of my hunting partners said it best: "The more you invest yourself in getting your meat, the sweeter it is. There is a true difference between sitting down to an elk steak that you've carried out on your back and dining on a beef steak some anonymous person butchered for you." I suspect that's just one more reason we hunt.

Do you have a tip for safely and quickly hauling big game out from the backcountry? Send us your suggestion and we'll print it in a future issue of Montana Outdoors. *The best tip receives a free* Montana Outdoors *T-shirt.*

THE HEART OF THE HUNT

Blowing out your back or knee while hauling an elk or deer from the backcountry isn't the only health danger facing hunters. Crystelle Fogle, head of the Montana Cardiovascular Health Program, says that gutting and dragging out the animal can stress the cardiovascular system and lead to a heart attack in the field. "Even the excitement of just seeing or shooting a big game animal can trigger a heart attack in some high-risk individuals," she says.

Fogle says most hunters are healthy enough to handle the added stress of hunting and moving downed game without problems. "But those with existing heart disease, high blood pressure, or sedentary lifestyles should take extra precautions while hunting," she adds.

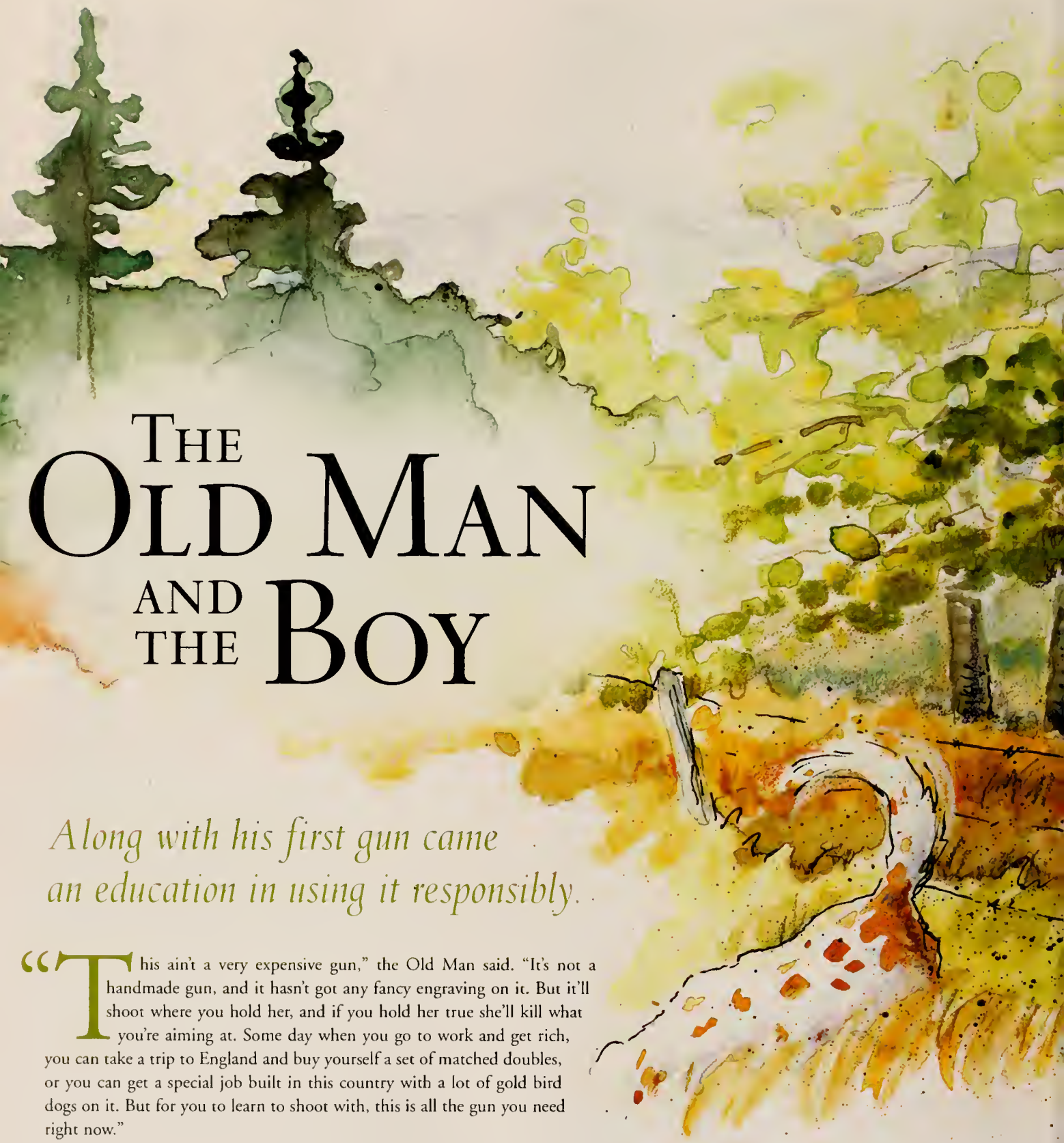
TIM CHRISTIE

SIGNS OF THE TIME As hunters age, even those in exceptionally good physical condition face an increased risk of heart attack or stroke when afield. Learn the signs.

Some tips for staying heart healthy when afield:

- **Learn to recognize symptoms** of a heart attack or stroke in yourself and your hunting partners. Heart attack: chest pain or discomfort, pain in the neck or jaw or shoulder, prolonged shortness of breath, dizziness, or heart palpitations. Stroke: suddenly having difficulty walking, speaking, understanding, or seeing, as well as numbness or weakness on one side of the body. If any of these occur when you're hunting, sit down and take a breather. If the symptoms don't go away after a few minutes, you may be having a heart attack or stroke and should immediately seek emergency help.
- **Carry a cell phone and GPS.** If you notice any of the above symptoms in yourself or others in your hunting party, call 911.
- **Those who have been diagnosed with heart disease should see their physician for a preseason checkup.** They should also bring rescue medications such as nitroglycerin. (This drug has a poor shelf life, so make sure it hasn't expired.)
- At least six weeks before hunting season, **begin increasing aerobic activity** such as walking or hiking.
- Eating fatty foods, drinking alcohol, smoking, and sudden exertion or excitement can **increase the risk of a heart attack or stroke.**
- Wear layers of clothing to stay warm. **To reduce the chance of overheating,** remove layers as needed while hunting.
- **Stay hydrated** by drinking water or sports drinks.
- **Activity at increased elevation,** especially at altitudes higher than 5,000 feet, puts extra strain on the cardiovascular system. This is especially true for people who have been diagnosed with heart disease.

—Tom Dickson



The Old Man and the Boy

Along with his first gun came an education in using it responsibly.

"This ain't a very expensive gun," the Old Man said. "It's not a handmade gun, and it hasn't got any fancy engraving on it. But it'll shoot where you hold her, and if you hold her true she'll kill what you're aiming at. Some day when you go to work and get rich, you can take a trip to England and buy yourself a set of matched doubles, or you can get a special job built in this country with a lot of gold bird dogs on it. But for you to learn to shoot with, this is all the gun you need right now."

It was maybe the most beautiful gun a boy ever had, especially if he was only eight years old at the time and the Old Man had decided he could be trusted with a dangerous firearm. A little 20-gauge, it was only a $20 gun, but $20 was a lot of money in those days and you could buy an awful lot with it.

The Old Man stuffed his pipe and stuck it under his mustache, and sort of cocked his big stick-out ears at me, like a setter looking at a rabbit he ain't supposed to recognize socially.

By Robert C. Ruark
Illustrations by Nora Wildgen

From the book THE OLD MAN AND THE BOY by Robert Ruark. Copyright ©1953, 1954, 1955, 1957 by Robert C. Ruark.
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"In a minute," he said, "I aim to whistle up the dogs and let you use this thing the best way you can. But before we go out to the woods I want to tell you one thing: You have got my reputation in your hands right now. Your mother thinks I'm a damned old idiot to give a shirt-tail boy a gun that is just about as tall as the boy is. I told her I'd be personally responsible for you and the gun and the way you use it. I told her that any time a boy is ready to learn about guns is the time he's ready, no matter how young he is, and you can't start too young to learn how to be careful. What you got in your hands is a dangerous weapon. It can kill you, or kill me, or kill a dog. You always got to remember that when the gun is loaded it makes a potential killer out of the man that's handling it. Don't you ever forget it."

I said I wouldn't forget it.

The Old Man put on his hat and whistled for Frank and Sandy. We walked out back of the house where the tame covey was. It was a nice November day, with the sun warm and the breeze not too stiff, and still some gold and red left in the leaves. We came to a fence, a low barbed-wire fence, and I climbed it, holding the gun high up with one hand and gripping the fence post with the other. I was halfway over when the barbed wire sort of caught in the crotch of my pants and the Old Man hollered.

"Whoa!" the Old Man said. "Now, ain't you a silly sight, stuck on a bob-wire fence with a gun waving around in the breeze and one foot in the air and the other foot on a piece of limber wire?"

"I guess I am, at that," I said.

"I'm going to be pretty naggy at you for a while," the Old Man said. "When you do it wrong, I'm going to tell you. I know you haven't loaded the gun yet, and that no matter what happens nobody is going to get shot because you decide to climb a fence with a gun in your hand. But if you make a habit out of it, someday you'll climb one with the loads in the gun and your foot'll slip and the trigger'll catch in the bob-wire and the gun'll go off and shoot you or me or somebody else, and then it'll be too late to be sorry.

"There's a lot of fences around woods and fields," he said. "You'll be crossing fences for the rest of your life. You might as well start now to do it right. When you climb a fence, you lay the gun on the ground, with the safety on, 10 foot away from where you intend to cross the fence. You got the muzzle sticking in the opposite direction from where you're going. After you've crossed the fence you go back and pick up the gun, and look at it to see if the safety is still on. You make a habit of this, too. It don't cost nothing to look once in a while and see if the safety's on."

We walked on for a spell until we hit the corner of the cornfield. Old Sandy, the lemon-and-white setter, was sailing around with his nose in the air, taking the outside edge, and Frank, who was pretty old and slow, was making some serious game with his nose on the ground. In a minute Sandy got a message and went off at a dead gallop. He pulled up in full stride and froze by a clump of gallberry bushes. Frank picked up a little speed on the trail and headed up to Sandy. He raised his head once and saw Sandy on the point and stood him stiff and pretty. Maybe you've seen prettier pictures. I haven't.

"Can I really shoot it now?" I said.

"Load her up," the Old Man said. "Then walk in, and when the birds get up pick out one and shoot him."

I loaded and walked up to the dogs and slipped off the safety. It made a click that you could hardly hear. But the Old Man heard it.

"Whoa," he said. "Give me the gun."

I was mystified and my feelings were hurt, because it was my gun. The Old Man had given it to me, and now he was taking it away from me. He switched his pipe to the outboard corner of his mustache and walked in behind the dogs. He wasn't looking at the ground where the birds were. He was looking straight ahead of him, with the gun held across his body at a 45-degree angle. The birds got up and the Old Man jumped the gun up. As it came up his thumb flicked the safety off and the gun came smooth up under his chin and he seemed to fire the second it got there. About 25 yards out a bird dropped in a shower of feathers.

"Fetch," the Old Man said, unloading the other shell.

"Why'd you take the gun away from me?" I yelled. I was mad as a wet hen. "Dammit, it's my gun. It ain't your gun."

"You ain't old enough to cuss yet," the Old Man said. "Cussing is a prerogative for adults. You got to earn the right to cuss, like you got to earn the right to do most things. Cussing is for emphasis. When every other word is a swear word it just gets to be dull and don't mean anything anymore. I'll tell you why I took the gun away from you. You'll never forget it, will you?"

"You bet I won't forget it," I said, still mad and about to cry.... "I don't even know why you took it. What'd I do wrong then?"

"Safety catch," he said. "No reason in the world for a man to go blundering around with the catch off his gun. You don't know the birds are going to get up where the dog says they are. Maybe they're running on you. So the dog breaks point and you stumble along behind him and fall in a hole or trip over a rock and the gun goes off—blooey."

"You got to take it off some time if you're planning to shoot something," I said.

"Habit is a wonderful thing," the Old Man said. "It's just as easy to form good ones as it is to make bad ones. Once they're made, they stick. There's no earthly use of slipping the safety off a gun until you're

"Habit is a wonderful thing," the Old Man said. "It's just as easy to form good ones as it is to make bad ones."

figuring to shoot it. There's plenty of time to slip it off while she's coming to your shoulder after the birds are up. Shooting a shotgun is all reflexes, anyhow.

"The way you shoot is simply this: You carry her across your body, pointing away from the man you're shooting with. You look straight ahead. When the birds get up, you look at a bird. Then your reflexes work. The gun comes up under your eye, and while it's coming up your thumb slips the safety and your finger goes to the trigger, and when your eye's on the bird and your finger's on the trigger the gun just goes off and the bird drops. It is every bit as simple as that if you start at it right. Try it a few times and snap her dry at a pine cone."

I threw the gun up and snapped. The gun went off with a horrid roar and scared me so bad I dropped it on the ground.

"Uh huh," the Old Man said sarcastically. "I thought you might have enough savvy to check the breech and see if she was loaded before you dry-fired her. If you had, you'd have seen that I slipped the shell back when you weren't looking. You mighta shot me or one of the dogs, just taking things for granted."

That ended the first lesson. I'm a lot older now, of course, but I never forgot the Old Man taking the gun away and then palming that shell and slipping it back in the gun to teach me caution. All the words in the world wouldn't have equaled the object lesson he taught me just by those two or three things. And he said another thing as we went back to the house: "The older you get, the carefuller you'll be. When you're as old as I am, you'll be so scared of a firearm that every young man you know will call you a damned old maid. But damned old maids don't shoot the heads off their friends in duck blinds or fire blind into a bush where a deer walked in and then go pick up their best buddy with a hole in his chest."

We went back to the house and up to the Old Man's room. He stirred up the fire and reached into a closet and brought out a bottle of old corn liquor. He poured himself a half a glassful and sipped at it. He smacked his lips.

"Long as we're on the subject," he said, "when you get bigger, I suppose you'll start to smoke and drink this stuff. Most people do. You might remember that nobody ever got hurt with a gun if he saved his drinking for the fireside after the day's hunt was over, with the guns cleaned and in a rack or in a case. I notice you ain't broken your gun yet, let alone cleaned it, and it's standing in a corner for a child to get ahold of or a dog to knock over. I suggest you clean her now. That way you know there aren't any shells left in her. That way she don't rust. And since you have to break her to clean her, you might as well put her in her case."

Maybe you think the Old Man was cranky, because I did then, but I don't anymore. I've seen just about everything happen with a gun. One fellow I know used to stand like Dan'l Boone with his hands crossed on the muzzle of his shotgun, and one day something mysterious happened and the gun went off and now he hasn't got any hands anymore, which makes it inconvenient for him.

I've seen drunks messing with "unloaded" guns and the guns go off in the house, sobering everybody up. An automatic went crazy on me in a duck blind one day and fired every shot in its magazine. Habit had the gun pointed away from the other fellow or I'd of shot his head off with a gun that was leaping like a crazy fire hose. I saw a man shoot his foot nearly off with a rifle he thought he'd ejected all the cartridges out of. I saw another man on a deer hunt fire into a bush a buck went into and make a widow out of his best friend's wife....

When I was 11, the Old Man stole my little 20-gauge from me. He grinned sort of evilly and announced that he was an Indian giver in the best and strongest sense. I was puzzled, but not very, because the Old Man was a curious cuss and a kind of devious mover. I went back to my bedroom later, and on the bed was a 16-gauge double with a leather case that had my name on it. There were engravings of quail and dogs in silver on the sides and my name on the silver buttplate.

The Old Man was taking a drink for his nervous stomach when I busted into his room with the new gun clutched in my hands. He grinned over the glass.

"That there's your graduation present," he said. "It's been three years since we started this business, and you ain't shot me, you, or the dogs. I figure it's safe to turn you loose now. But I'll take that one away from you if you get too big for your britches and start waving it around careless."

I'm big enough to cuss now, and I've seen a lot of silly damned fools misusing guns and scaring the daylights out of careful people. But they never had the Old Man for a tutor. Some people ain't as lucky as other people.

TOO MANY PLACES TO HUNT

Advice on figuring out where to hunt on Montana's overwhelming 30 million acres of public land. BY DAVE CARTY

At around 275 pounds, my buddy John is no candidate for "Dancing with the Stars." But for a few days every September he puts on his game face and the two of us chase blue grouse in the vast public forests of southwestern Montana. Last year I hunted with John while also working the kinks out of a new setter puppy, named Hanna. It turned out that I found the first birds before Hanna did. They flushed and vanished, but she relocated them a few minutes later, back on the ground. This time when one of the grouse went up, John snapped off a shot and it dropped like a stone. Hanna made her first wild-bird retrieve and proudly returned with the grouse in her mouth. >>

WHERE IS HE? A hunter hides from a buck on national forest land in northwestern Montana. Across the state, resident and nonresident hunters have access to vast tracts of public hunting land managed by state and federal agencies. The first step in finding your own hotspot is to get as many maps as possible. The best ones, such as those published by the Bureau of Land Management, clearly show public and private land boundaries and differentiate among the various public holdings by color.

Finding hunting land on your computer

The Internet is a great way to find maps and other information to help locate hunting spots. One source is the Montana Public and Private Land Ownership Maps site (http://nris.state.mt.us/gis/ownmaps.asp), managed by the Montana Natural Resource Information System, which shows the boundaries of state and private land throughout Montana. Like BLM maps, these show state and federal land coded by color.

Another great source is Google Earth, a free "virtual globe" program that superimposes satellite imagery, aerial photographs, and other sources to allow you to see, in 3-D and from every possible angle, any place in Montana. Though it doesn't show property boundaries, Google Earth displays landforms such as mountains, valleys, and streams that you can cross-reference with two-dimensional maps to better understand the lay of the land you want to hunt.

That particular section of national forest is great for blue grouse, and it's a spot any hunter could find on his own. Whether for grouse and other upland birds, waterfowl, or big game, Montana is blessed with millions of acres of public hunting land. These include state and national forests, state wildlife management areas (WMAs) and fishing access sites, federal waterfowl production areas (WPAs) and national wildlife refuges (NWRs), and other land owned and managed by the state and the Bureaus of Land Management (BLM) and Reclamation (BOR). In total, Montana contains more than 30 million acres of public hunting land.

The only drawback to having so much public property available is figuring out just where to begin. Fortunately, land management agencies provide exceptional maps detailing the boundaries of their holdings. All a hunter needs is a pair of legs and the willingness to do some exploring.

STEP ONE: GET MAPS

The first step in learning the most effective way to hunt public land is to buy good maps. Over the years, I've bought county maps, U.S. Forest Service (USFS) maps, satellite images overlaid on road maps, you name it. For the average hunter who wants a detailed and reasonably accurate picture of the various public land in an area, nothing beats the BLM maps, officially called Surface Management Edition Maps. Buy them at BLM offices statewide, on-line at the agency's Montana–Dakotas website, or at many sporting goods stores.

Other maps I couldn't live without are those in the Montana edition of the *DeLorme Atlas & Gazetteer*. This tabloid-sized map book, sold at gas stations and sporting goods stores, is essential for general navigation when researching areas at home or while driving around in the country. By cross-referencing my Montana *Gazetteer* with the corresponding BLM map, I can usually make sense of the often-confusing roads and trails that crisscross the state.

For those hunting primarily in the mountains, national forest maps show even more road and trail detail than BLM maps. And providing even finer detail are the U.S. Geological Survey topographic maps, which delineate springs, cliffs, meadows, parks, points, draws, and other land features. The USFS and the BLM also regularly publish supplemental maps showing reasonably up-to-date road and trail closures.

These public maps list phone numbers of state and regional offices to call for additional information or resources. The numbers are also available in the *Montana Access Guide*, a free pamphlet available at any Montana Fish, Wildlife & Parks (FWP) regional office or by calling the department at (406) 444-2535.

ESSENTIAL WEBSITE: fwp.mt.gov/hunting/hunteraccess

STEP TWO: GET MOVING

Once you've got maps in hand, it's time for the legwork. John Berger, a Bozeman taxidermist and serious bowhunter, spent years exploring BLM land on the Charles M. Russell NWR. That's where a sizable chunk of the agency's 8 million acres in Montana is located. "I'd go horn hunting there in the spring and really got to know the area over the years," Berger says. "I found areas where I could hike in a mile and a half and get away from people, little pockets of cover where, it seemed like every fall during the rut, those elk would move in. I did my homework."

Berger's knowledge of the area and his willingness to walk away from roads put him into game: His most recent CMR bull, a five-point, was a direct result of hard work and good timing. "We realized that on public ground, the hunting is better later in the bow season," Berger says. "The elk get hammered so hard in the beginning that it seems they respond better to calls during the first ten days of October."

Berger and his hunting partner found an elk herd that had a few satellite bulls moving with the group. "We were moving with them on the side of a hill in the cover, about 30 yards inside the trees. I cow-called a couple of times, and one of those satellite bulls came in. He pulled his leg up to step over some timber, and I zipped an arrow right in."

CHUCK & GALE ROBBINS

LOOK CLOSELY Once you've scoured maps to locate areas that might hold game, visit the sites and start looking. Many successful public land hunters keep detailed notes of what they see and don't see on their scouting and hunting trips, which allows them to cross out nonproductive spots and zero in on areas that hold game.

Now it's time for a little tough love. I'll bet the ranch that none of your friends, no matter how saintly they otherwise might be, will tell you exactly where they hunt. Nor will anyone else give you more than general directions. So let me be the first to say it: The best way to find game animals on public land is to go out and look for them. And that means there will be days—sometimes several in a row—when you may not find the animals you're after.

My experiences may be instructive. For the last several years I've traveled to southeastern Oregon to hunt chukars. The region contains literally thousands of square miles of public land, almost all of it administered by the BLM. The downside is figuring out just where in that sea of cheatgrass to find birds.

After a couple of nonproductive hunts, I decided to explore a region recommended by a friend. I started with several birdy-looking drainages, but they didn't pan out. (I long ago gave up trying to figure out why what appears to be perfect cover for game birds doesn't hold a single one.) Eventually, though, I started finding chukars. And whenever I found a place with birds, I marked it down on my BLM map. Four years later, my map is cross-hatched with notes and circles. I still explore new drainages, but I've now catalogued enough public land to last me for the rest of what I hope will be a long and happy life afield.

It works the same way in Montana. I've spent the last few years hunting Huns and the occasional sharptail on a small tract of BLM land on the Madison River. This isn't typical Hun habitat, but at least two coveys of my favorite bird live there, and I have figured out roughly where to find them.

Not all public land is created equal, of course. Some of it is overgrazed, overhunted,

CHUCK & GALE ROBBINS

Bozeman writer Dave Carty hunts upland game birds and waterfowl on public land throughout the West.

and undermanaged. On the other hand, land managed by the U.S. Fish and Wildlife Service and FWP have from good to superb habitat, because they're managed exclusively for wildlife. WPAs, WMAs, and national wildlife refuges always hold game, at least for a month or so. These places are no secret; they get hit hard early in the season. I don't like to hunt with other people around, no matter how much game there is, so I usually avoid these holdings until later in the season.

Perhaps the biggest sleepers are state fishing access sites. These areas, purchased for river fishing access, almost always contain anywhere from a few to several hundred acres of prime wildlife habitat. I have shot a couple of whitetails at fishing access sites and seen hundreds of others, all on holdings sometimes no more than a few dozen acres in size. Most fishing access sites are open to hunting, and in some parts of the state they're virtually ignored.

My other public land secret is BOR land. Though most BOR uplands are hit hard throughout the season, many hunters don't know that the agency also owns land around several large reservoirs, including Nelson, Fresno, and Canyon Ferry. I have hunted these areas for ducks and pheasants, sometimes successfully and sometimes not. As on most public reservoirs, waterfowl hunters

hammer BOR waters early in the season. But later on, just before freeze-up, incoming flights produce decent hunting. The trick, as is always the case with ducks, is to be there when the birds are.

BIGGER IS BETTER

You'll usually have better success hunting one contiguous chunk of public land rather than a bunch of small parcels. And the bigger, the better. In large parcels, you can walk a few miles from access roads to places most hunters won't bother to visit. For example, if you're trying to decide which BLM land in eastern Montana will be best for hunting mule deer or pronghorn, look for large swaths of pink on your BLM map or *Gazetteer*. Then figure out how to get away from the crowds.

I don't mean driving in on an ATV or a truck. Vehicles are a tool to get you to a starting point, which is where you begin *walking*. Gunsmith Dennis Gentry of Belgrade has hunted antelope successfully for years on BLM land in eastern Montana, almost always on foot. "Being in a truck is not how you see animals, not on public land anyway," he says. "A lot of people just drive. They actually help me out, by keeping the game stirred up. They're driving around and getting out and shooting from next to their truck. I'm not afraid to get out and walk a little bit."

Two other hunting areas worth knowing about are those along large rivers and on state trust land. Montana's stream access law permits waterfowl hunting within the high-water marks of all navigable rivers in the state. A few important things to know: This does not include deer or other big game hunting, and hunters can only gain access to rivers from public land, from private property with permission of the landowner, or from public bridges. Also, if you shoot a duck or goose that falls on land above the high-water mark, you'll need permission from the landowner to retrieve it. (That makes hunting on most of the state's small streams nearly impossible.)

Trust land is state property sold or leased to generate revenue for school districts and other public needs. In much of the state, trust land is generally Sections 16 and 36, and it shows up as blue boxes on BLM maps. Many stipulations apply to hunting trust land, the most important of which is that you can only access it from public roads or land. Also, trust land is rarely signed, so hunters need to be extra careful to ensure they don't trespass when trying to reach these public holdings. (For details, go to

GETTING AWAY FROM THEM ALL Experienced Montana hunters say they look for large chunks of public land where they can walk several miles to put adequate space between themselves and other hunters.

DONALDMJONES.COM

STATE TRUST LAND: http://dnrc.mt.gov/trust

GARYKRAMER.NET

TOSS THIS "PROBLEM" TO MY STATE In much of the nation, finding any public hunting land is a major chore, much less having too much land to choose from, as is the case in Montana.

http://dnrc.mt.gov/trust/ and look under "Frequently Asked Questions.")

If you choose to hunt along large rivers or on trust land—and I often do—pay close attention to the access laws explained in pamphlets available at FWP offices or online. Better yet, call the local game warden (phone numbers are available from FWP offices), who will be happy to clarify laws regarding public hunting access.

Still not sure which public areas to hunt this season? I understand. After two decades of hunting in Montana, I still find the abundance of public land here a bit overwhelming. But consider the alternative. Berger tells the story of a guy he met in a Bozeman cafe one morning. The fellow was from Texas, where public hunting land is almost nonexistent.

"What's the elk hunting around here like?" the Texan hunter asked.

"You know all that land from here to Yellowstone Park?" Berger replied. "It's pretty much all public ground."

"You mean I can just drive up into the mountains and get out and hunt?"

"All the way to Yellowstone Park," Berger said, adding, "We've got it so good."

Thousands of Montana hunters would have to agree.

SECRET SPOTS

"Swear to me you won't tell anyone about this place..."

by John Barsness

Secret spots may very well be the most treasured thing a Montana hunter or angler owns. These hidden parks, bowls, ridge tops, pools, and points are not just places where we can avoid impertinent creditors, but are part of our very selves, mote of an extension of what we are than eye color. Some have even been passed down from generation to generation: "To my shiftless son Rick, who is the finest wingshot I know but also likely to hock anything not bolted down, I leave a section of CRP in Chouteau County where I have killed at least a score of roosters every fall. No, you don't get the Land Cruiser."

Of course, some of us seem better at finding secret spots than others. When someone we know comes back with yet another six-point elk, we shrug and say, "He's got a secret spot somewhere." As if a secret spot were the equivalent of a tame elk herd. The guy with the elk is likely to pull into town in the opposite direction from where he actually hunted, intimating he shot the bull just out past the Town Pump, and we could too if we only knew how.

Even the most inept among us are likely to have a few secret spots, yielding scads of 10-inch trout and doe mulies, but I once knew a guy who didn't possess a single one. That was especially strange because he worked as a fisheries biologist for the Bureau of Land Management, which required him to hike around all summer, "testing" little creeks with a spinning rod to see if trout lived there. Actually, it wasn't strange that he didn't find any fishing spots, because trout and BLM land are pretty much mutually exclusive. But he didn't find any hunting areas, either.

Well, no, let me amend that. Chester found secret spots every summer, like X Creek in the Garnet Range, which he said had mule deer sticking out of it "like the ribs on an ol' pointin' dog" (Chester originally came from New Mexico and liked to emphasize his southwestern drawl in certain situations). He went back on opening day and found X Creek to also be the secret mule deer spot of Butte, Montana.

Sometimes Chester shared his "great" secrets—all of which seemed to attract hordes of other hunters—with his friends. This happened often enough in our social circle that one Saturday when my buddy Kirby and I were headed out of town on a float trip, Kirb pointed toward the rows of vehicles in the Southgate Mall parking lot and said, "Look, one of Chester's secret spots." Chester finally gave up on Montana and moved back to New Mexico, where he shoots doves, which don't really have any secret spots.

Actually Chester's biggest problem was a lack of time, because it took so much of it to find trout on the BLM land that he wasn't left with much to look for anything else. Which is why X Creek remains X Creek in this narrative: I went back there a couple of years after Chester left and found a little side ridge where the mule deer loaf after all of Butte has passed through. I'd be happy to show it to him if he ever makes it back this way (but not to you).

Because that's the biggest problem with secret spots: keeping them secret. They come in two basic varieties: those discovered by thought and those that require sweat. The sweat spots are easiest to keep hold of, because if enough sweat is involved, it doesn't matter if anybody else finds out. I recently met a hunter who has taken four bighorn rams out of the Beartooth Plateau, and he doesn't give a damn if anybody knows where he goes. This is one of the last areas on the continent where you can just buy a bighorn permit and go out hunting, instead of putting your name in a hat with 20,000 other aspirants. There are, of course, a couple of catches. One is that there's a quota on the number of rams to be taken in any year, so as soon as the quota's filled you're done hunting, even if you haven't filled your permit. The other is that the country is as steep as the Chrysler Building and has more snow. This guy waits until the snow is crotch

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Look, if you have to brag to somebody about some great spot you found, just lie. That's what I do. So if you ever hear me telling someone how I got the big buck up Yellowtail Creek, you can just about bet it was Redhead Gulch.

deep and backpacks in there and camps until he finds the ram he wants. No, don't thank me; you're welcome to it.

The secret spots you figure out need a bit more protection. I still call Chester's area X Creek because I thought for part of it myself, by noting that when most of Butte went up the creek they all went "farther back" into the hills and canyons, driving right by a quarter-section of public timber at the bottom of the drainage, next to a ranch's fence line. In two years I've seen three mule deer and a bull elk in there, enough game for one or two people, which is why my wife and I are the only ones to know about it. In more settled country, people have been known to tail successful hunters out of town, trying to find their spots. One Minnesota bowhunter I know hunts several farms in the southern part of the state and has a hiding place for his vehicle on each one.

That's the saddest aspect of the secret spot these days. Over the past decade or so, it seems that some of the unwritten rules concerning the care and usage of secret hunting and fishing areas are increasingly abused. Perhaps it's the lack of continuity between generations (though this may be a bit of nostalgia on my part), but I think that all those unwritten rules used to be passed along from older hunters and anglers to us younger folks, back in the days when more of us learned about the outdoors from parents and older friends than from the Discovery channel.

Rule One might seem the simplest and most cynical of the lot, but it's the basis of the whole structure: If you don't want somebody to know about your secret spot, don't tell them. A secret is something not everybody knows. This rule affects just you and yours, so I don't care if you break it as long as you break it with me. Rule One is usually violated by the younger and less experienced (who quickly learn), but sometimes even older people get reminded. An older writer once told me about how he'd found a good mule deer spot in southwestern Montana and had written an article about the hunt, briefly mentioning the mountain range. The next year he couldn't get a motel room in the one small town close to his mule deer mountains; even then he didn't catch on until he overheard someone talking about the great article so-and-so wrote.

Look, if you have to brag to somebody about some great spot you found, just lie. That's what I do. So if you ever hear me telling someone how I got the big buck up Yellowtail Creek, you can just about bet it was Redhead Gulch. Or someplace else, which is even more likely.

Rule Two: Never prod anybody about their spots. I've been guilty of this, and after getting the sort of answers I give now, finally realized how rude I was.

Example: "Where'd you get your elk?"

Correct Answer: "The Beaverhead-Deerlodge National Forest." (The Beaverhead-Deerlodge is the size of Connecticut and doesn't have any street signs.)

Rule Three: Never discuss secret spots among friends when in unknown company. A young guy we'll call Durwood recently steered an older friend to a good elk canyon. The older guy got a nice bull, and the next time Durwood saw him was at a large company party. Durwood walked up, clapped his friend on the back, and shouted, "Hey, I hear you got a hell of a bull up Eagletop!" No.

Rule Four: Never, ever go back to a secret spot someone's shown you unless they invite you or give permission. If you show someone your secret spot, especially someone you don't know as well as your father, it isn't considered terribly rude to spell this out, just because so many people don't know the rules. My friend Milo has a secret elk and mule deer spot up Rock Creek where he's taken a big four-point mule deer and a six-point elk over the past few years. One fall he took along one of the guys from work, and the next year the guy showed up just down the road with his own camp and four friends. Luckily, Milo's secret spots are almost as notorious as Chester's, except instead of being known as the parking lots they're known as the long hauls. In this case the "friend" from work and his buddies had to cross the creek in the dark (the only thing more slippery than Rock Creek's bottom is a Gulf Coast oil spill) and then climb 2,500 feet over 2 miles. Evidently they didn't find anything that year because they haven't been back.

Rule Five: If you're given permission to return to someone's secret spot, you don't abuse the privilege by inviting other people, littering, or taking more than one or two pheasants, walleyes, or whatever. And you offer to share the bounty with your benefactor.

Rule Six is that if you violate any of the rules except Rule One, you'll never ride beside Teddy Roosevelt across that bully hunting ground in the sky—and in this life you may be missing a few teeth.

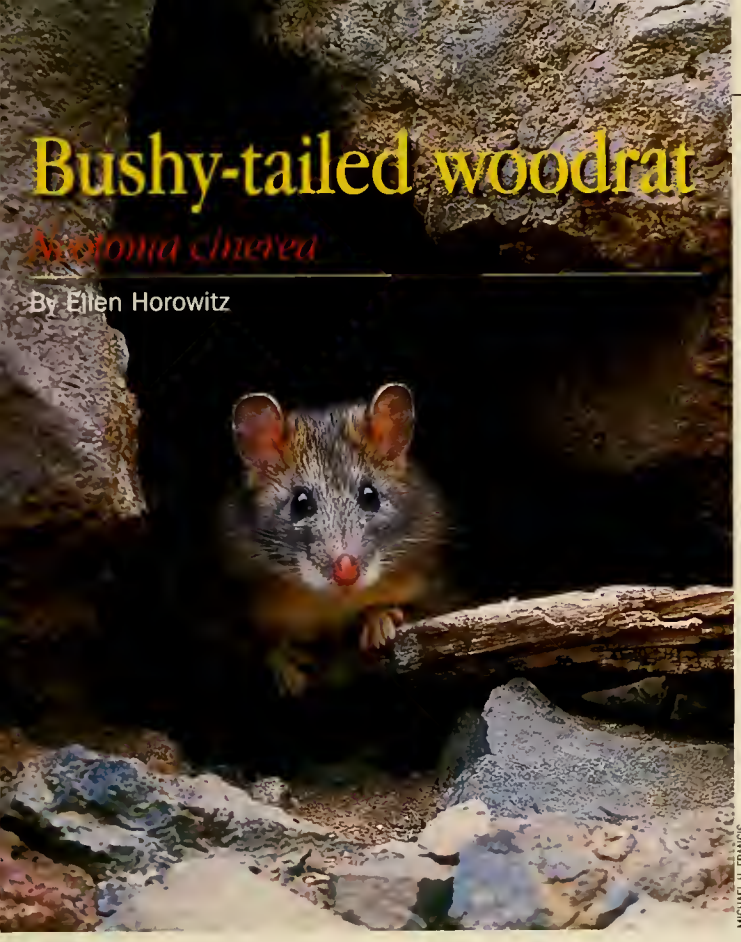
If you feel an urge to break Rule One, call me...collect.

John Barsness of Townsend is a freelance writer and co-owner of Deep Creek Press (riflesandrecipes.com). He's not saying one word more.

Bushy-tailed woodrat

Neotoma cinerea

By Ellen Horowitz



MICHAEL H. FRANCIS

A recent rain had intensified the piney scent of the woods. As I walked through the forest, the fresh air encouraged deep breathing and deep thinking. Then a pungent, musky odor roused me from my daydreaming like a slap in the face. That's when I noticed the buckled logs and roofless ruins of a homestead cabin beneath a forest of ponderosa pines. I peered through the dilapidated walls and saw among the rubble a breadbox-sized mound containing sticks, pine needles, leaves, a chewing tobacco can lid, and a piece of yellow nylon strap. Judging by that odd collection and the pervasive aroma, I knew I had entered the domain of a bushy-tailed woodrat.

IDENTIFICATION: Though commonly known as the pack rat, the bushy-tailed woodrat is actually more closely related to the deer mouse than to what many people think of as a rat—those scaly-tailed residents of big city sewers. This dapper-looking rodent has large round ears, long whiskers, soft buff-gray fur, big onyx eyes, white feet, and a bushy, squirrel-like tail. From nose to tail tip it measures roughly 15 inches.

RANGE: The bushy-tailed is one of eight woodrat species in North America. Of the seven in western states and provinces, the bushy-tailed is the most widely distributed and the only species found in Montana. Except for the far northeastern corner, it can be found statewide, in prairies, high mountain forests, and alpine talus slopes.

HABITS AND HABITAT: Woodrats are expert climbers that seek cliffs, caves, canyons, and rocky areas for their dens, as well as hollow trees, buildings, and other man-made structures. They make nests within complex structures built of sticks, bark, rocks, bones, animal droppings, and leaves gathered during nightly forays. These materials provide insulation against temperature extremes and offer protection from owls, weasels, bobcats, bears, and other predators. According to Kerry Foresman, professor of wildlife biology at the University of Montana, the structure is known as a midden and can be more than 10 feet tall and 10 feet wide. "Generation after generation of woodrats will add on to a midden," he says. Dens contain nests made of soft fibrous materials for sleeping and raising young. In late summer, woodrats begin gathering and drying leaves, along with mushrooms, berries, and seeds, which they store in their den to eat during winter.

The distinctive odor emanating from woodrat living areas comes from the animal's urine or the musky secretions produced from glands on a male's belly. Like many animals, pack rats use urine to mark territory and post personal information. The stench and the ramshackle midden structure create the impression that woodrats are messy, dirty creatures. But Foresman stresses that woodrats keep their nests immaculate. "They prefer to defecate and urinate in places separate from where they eat and sleep," he says.

WHAT THE WOODRAT PACKS: In addition to natural materials, bushy-tailed woodrats gather tinfoil, bottle caps, broken glass, and other shiny objects. From this insatiable urge to collect comes the nickname pack rat. (The woodrat is also known as the trade rat for its habit of dropping one item in favor of another.) Pack rat middens can contain all sorts of valuables. When diamond earrings and a diamond ring valued at $1,000 disappeared from a cabin west of Kalispell several years ago, police said a pack rat was their prime suspect. In 2003, a rusted .22-caliber gun and penny were found in a woodrat midden close to an unidentified human skull west of Kalispell. Detectives considered the gun's serial number and the date on the penny as valuable clues, but were unable to solve the case.

FAMILY LIFE: Bushy-tailed woodrats live alone or in harems of one male and one to three females. On average, a litter contains two to four young. The newborns have specialized teeth that allow them to grip the female's nipples, and for the first three weeks she literally drags her youngsters wherever she goes. After eight weeks the young woodrats leave the den (and the mother likely breathes a great sigh of relief).

OTHER SIGNS: Cliffs and rock ledges that have been occupied by woodrats for a long time, sometimes hundreds of years, contain black or dark brown deposits that resemble geologic formations. Biologists have humorously named these formations, composed of metamorphosed pack rat droppings and urine, "amberat" and "ratite."

ECOLOGICAL IMPORTANCE: Pollen, leaves, animal bones, and other natural items trapped in the rocklike urine formations have been preserved as though in amber for thousands of years. Scientists who study amberat in the arid Southwest and Yellowstone National Park are learning much about changes in plant and animal communities over time.

Ellen Horowitz is a writer in Columbia Falls.

DOG'S BEST FRIEND

A tired yellow Lab warms to a kiss from his owner. For many hunters, fall is not just hunting season, it's also hunting dog season. Photo by Denver Bryan.

TOP HONORS

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